MEMENTO ROUSSEL

ROUSSEL

1964

MEMENTO

ROUSSEL

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LES LABORATOIRES

ROUSSEL

35, Boulevard des Invalides,
PARIS 7^{e}

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Particulars and supplies from:

FRANCO-INDIAN PHARMACEUTICALS PRIVATE LTD.,
20, Haines Road,
BOMBAY-11.

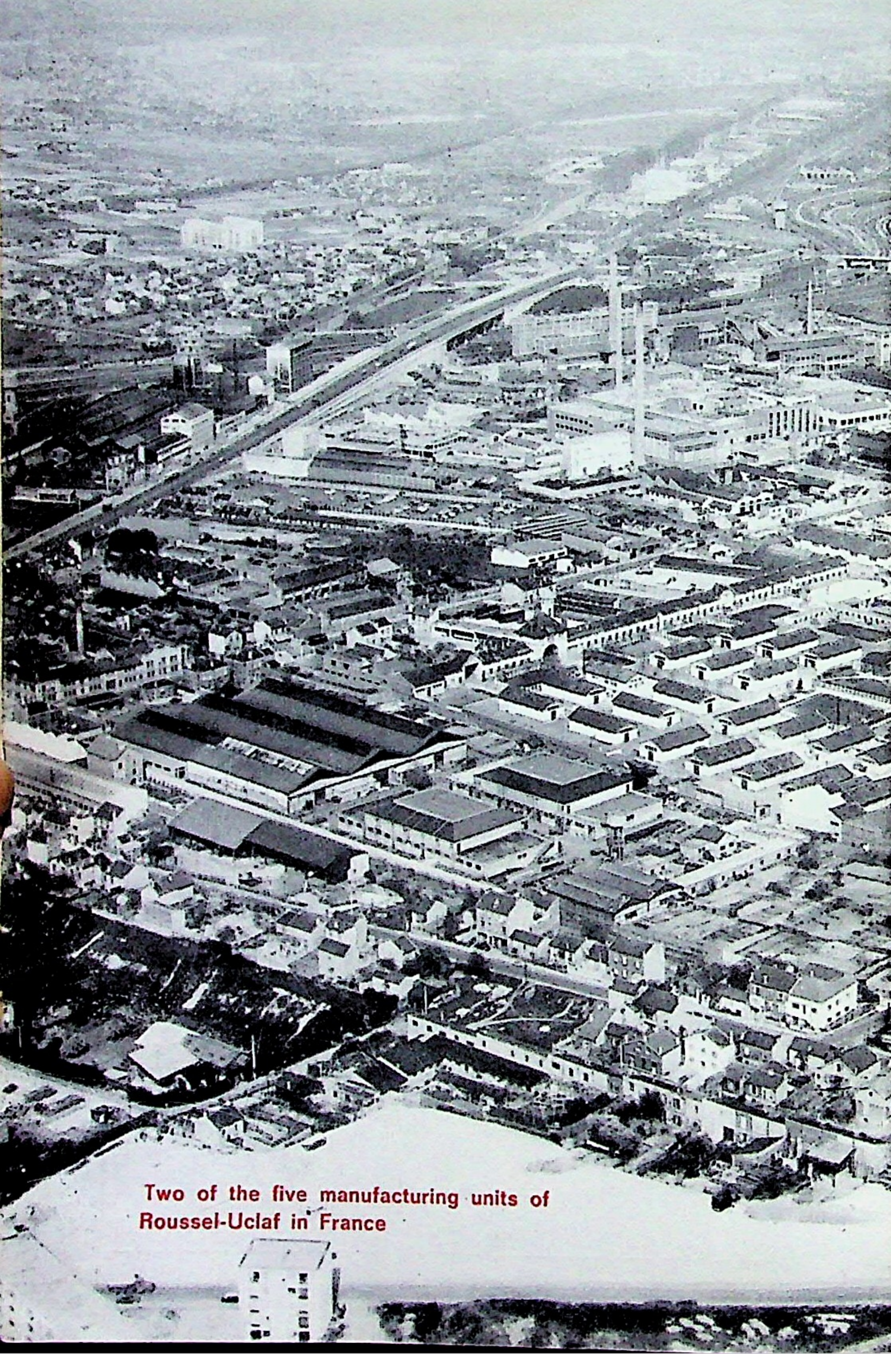
For the Medical Profession only

Dear Doctor,

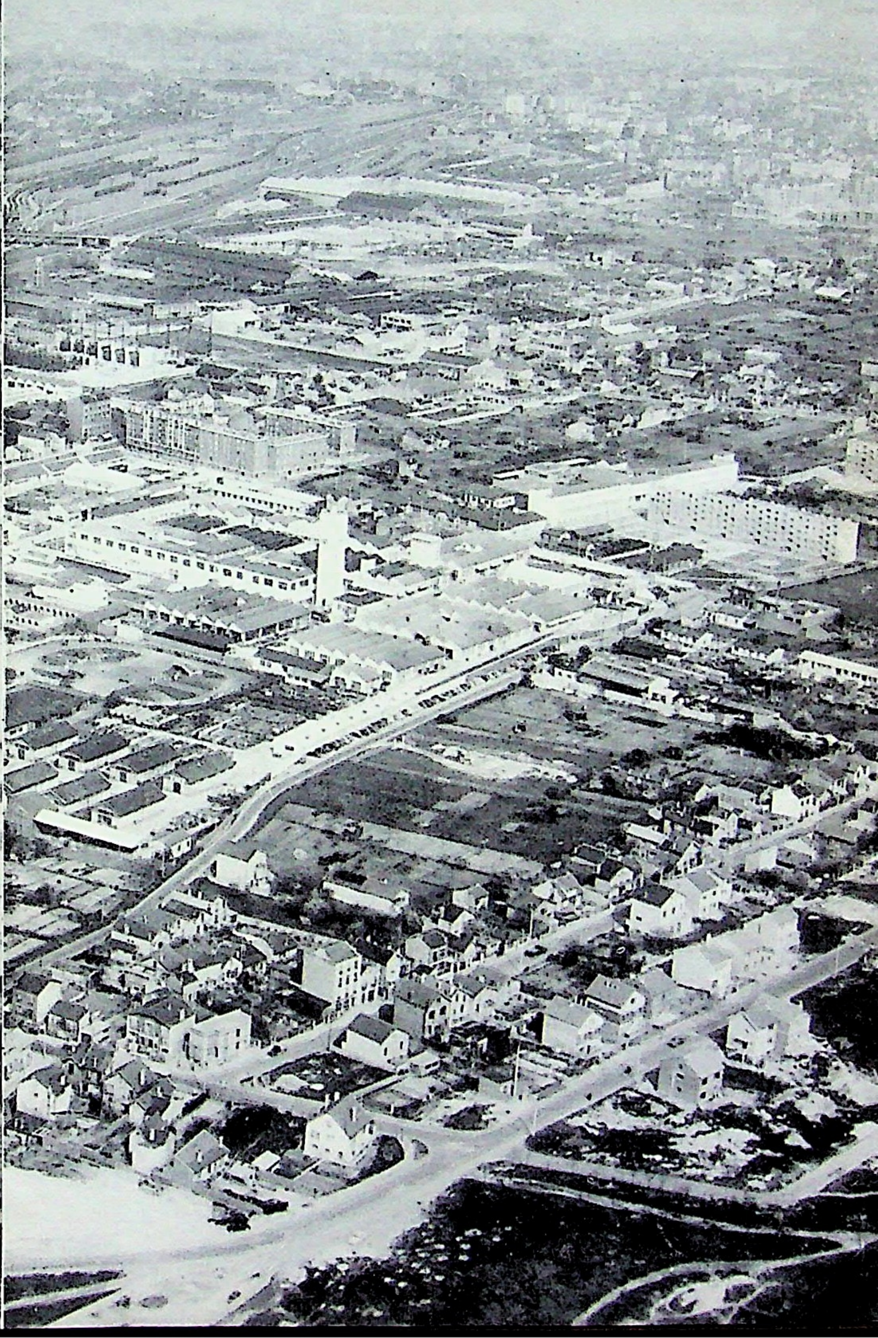
This MEMENTO *has been prepared for you so that you may have at hand a convenient reference book on the products of* LES LABORATOIRES ROUSSEL, PARIS, *available in India.*

Apart from the alphabetically arranged product information and the therapeutic index at the end, there is a chapter on modern laboratory investigations and diagnostic procedures which may perhaps be of some interest to you.

May we take this opportunity of renewing our pledge to serve you and express the hope that our long association with the Medical Profession may continue to grow in the years to come.



Two of the five manufacturing units of Roussel-Uclaf in France



ROUSSEL-UCLAF

The ROUSSEL-UCLAF group in FRANCE has long been one of the world's most creative and reputed chemical and pharmaceutical enterprises. When it completed 50 years in the autumn of 1961, it could look back upon a phenomenal growth and expansion over the years.

The founder, Dr. GASTON ROUSSEL set up his first laboratory, the 'INSTITUT DE SEROTHERAPIE HEMOPOIETIQUE' at the foot of the ancient fort in ROMAINVILLE to produce Hemostyl, the anti-anemic serum extracted from horse blood, which was soon adopted by the whole world.

A man of vision, Dr. GASTON ROUSSEL not only foresaw but also helped usher in the great advances which the chemical and pharmaceutical industry was to make over the years and for this purpose created one after another, a number of units: LES LABORATOIRES GOBEY (1923), LES LABORATOIRES DE PROXYTASES (1923), LES LABORATOIRES FRANCAIS DE CHIMIOTHERAPIE (1928) and USINES CHIMIQUES DES LABORATOIRES FRANCAIS (UCLAF) (1930).

The UCLAF plant at ROMAINVILLE, which was set up to manufacture the basic raw material for

the other laboratories, was followed by another at the same place, a third at VERTOLAYE in the south-central Puy-de-Dome and a fourth at Neuville-sur-Saone, near LYON in east-central France. The latest UCLAF plant at ROMAINVILLE, which went into operation in 1948, specialises in antibiotics derived directly from fermentation such as penicillin, streptomycin, erythromycin, Soframycin (an antibiotic of ROUSSEL research) and Vitamin B_{12}.

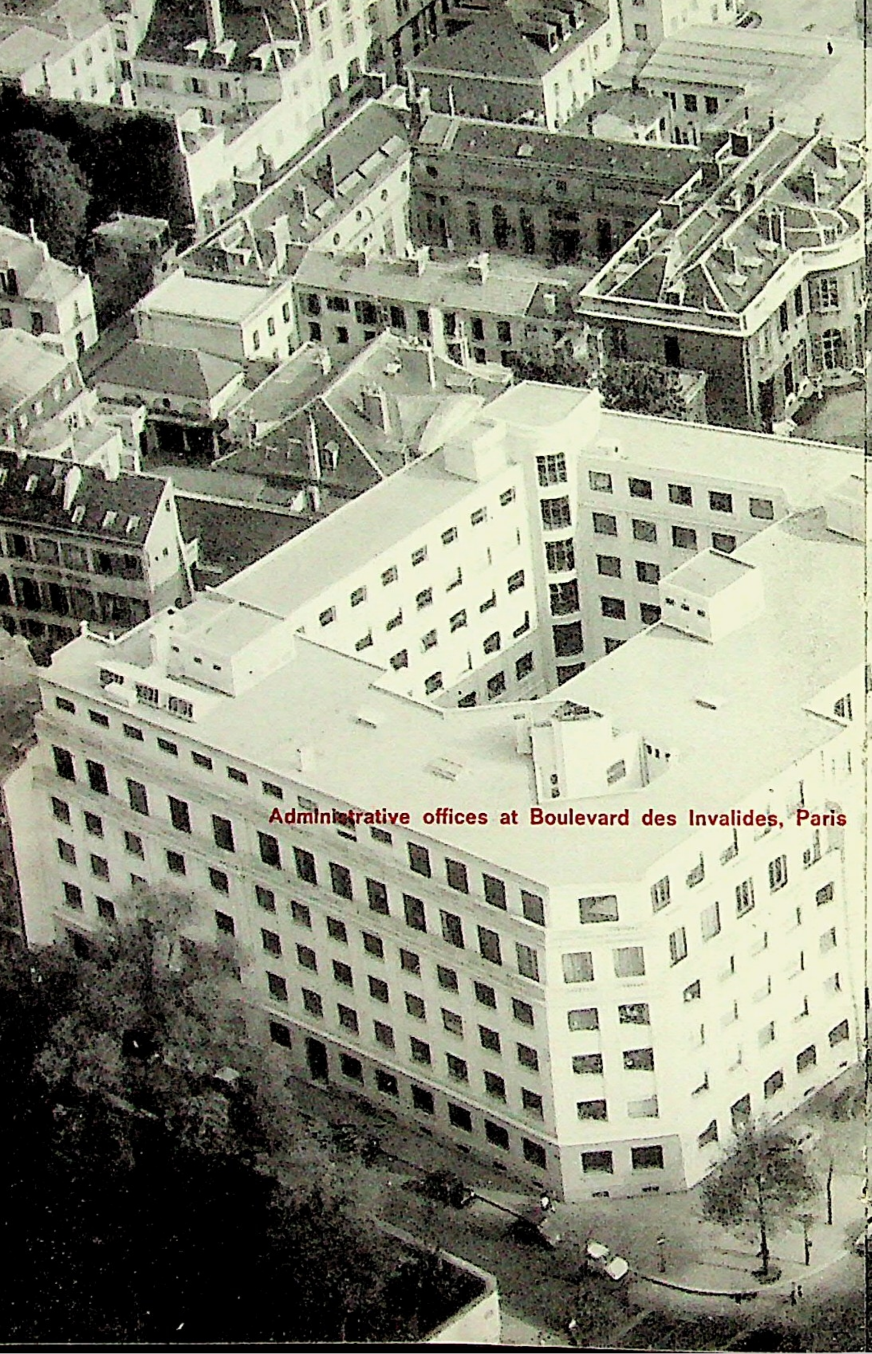
The various laboratories have been recently integrated to form one single organisation - ROUSSEL-UCLAF under its dynamic President, M. JEAN-CLAUDE ROUSSEL, the son of the founder.

Having concentrated on steroid hormones from the start, ROUSSEL-UCLAF, by 1933, successfully began the large-scale production of estrone and a few years later, undertook the manufacture of other sex hormones.

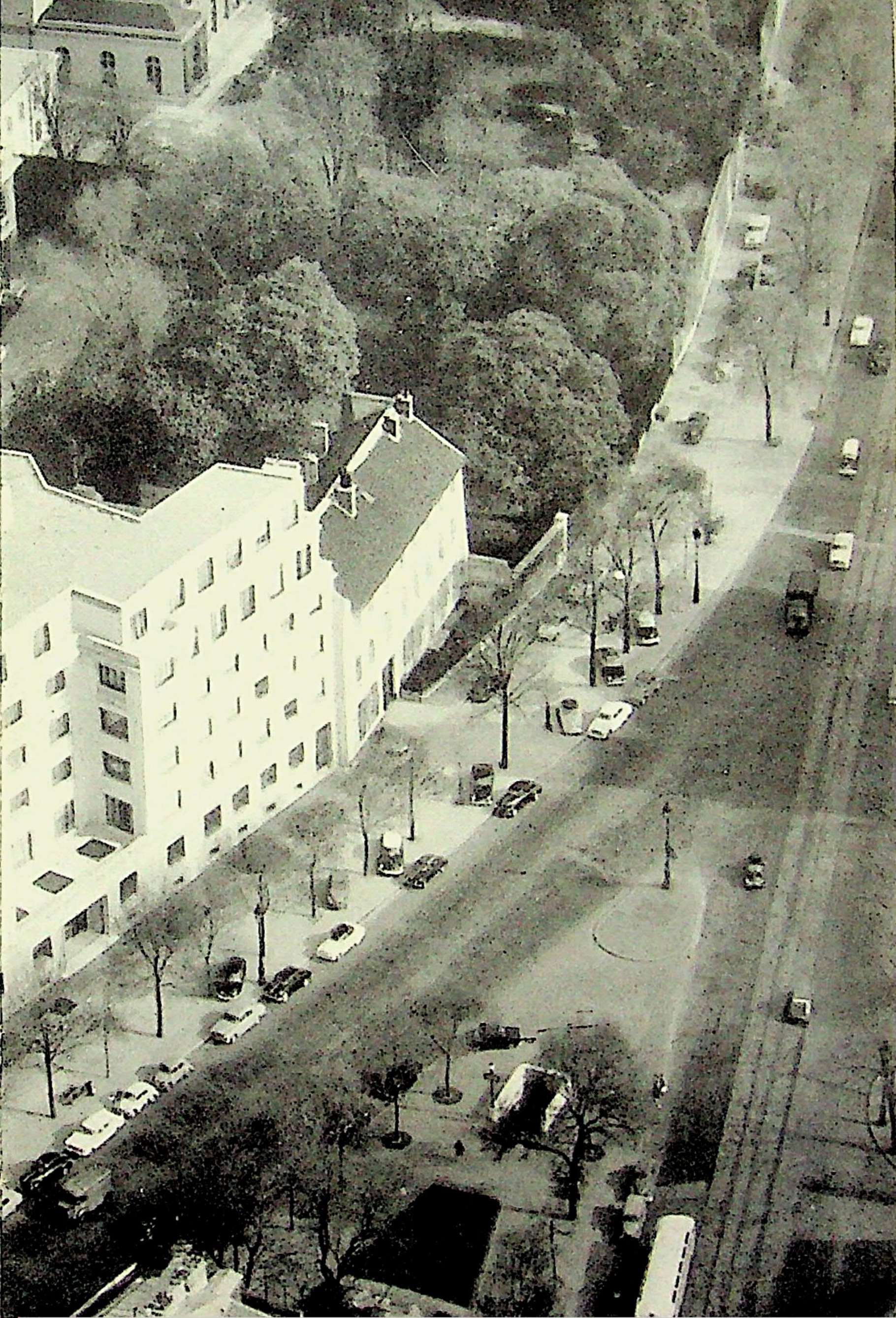
In 1945-46, the firm began to use partial synthesis to produce female hormones. In 1952-53, it successfully undertook the first manufacture of cortisone in Europe and is today, Europe's biggest producer of cortisone and its derivatives.

In four large research laboratories, its five production units in FRANCE and its factories in other countries of the world, ROUSSEL-UCLAF produce an annual 20 tons of steroids and 83 special pharmaceuticals which are distributed through major agencies and affiliates in 77 countries of the world.

(*Continued on page 12*)



Administrative offices at Boulevard des Invalides, Paris



The manufacture of ROUSSEL-UCLAF includes steroid hormones (testosterone, estrone, desoxycorticosterone, progesterone, cortisone and its derivatives), the principal antibiotics (penicillin, chloramphenicol, streptomycin, erythromycin and Soframycin), various vitamins such as Vitamin B_{12}, Vitamin D_2 and Vitamin K; alkaloids, glycosides, amino-acids, biological products and numerous synthetic reagents.

The high technical skill of its scientific workers, the polyvalence and the capacity of its industrial equipment, place ROUSSEL-UCLAF in a favourable position to manufacture the most difficult synthetic and biological products used in current therapeutics.

Much of the accelerated progress of ROUSSEL-UCLAF over the years must be attributed to its extensive research activities, led by an eminent scientist, Prof. LEON VELLUZ.

The attention paid to research, the development of new products, the endeavour to maintain the standards of quality associated with the ROUSSEL emblem throughout the world, have all been guided from the inception of the firm to the present day by one principle—to study the needs of the Physician and to provide him increasing assistance in his task of combating ill-health and disease.

Agencies and Depots of ROUSSEL in the world

EUROPE

Austria	F. Joh Kwizda Chem Fabrik, Vienna.
Belgium	Labunis S.A., Brussels.
Cyprus	Sophocle P. Dimitriades & Son, Nicosia. The British Pharmacy, Nicosia.
Denmark	R. Baungaard & Co., Copenhagen.
England	Roussel Laboratories Ltd., Middlesex.
Finland	Oy International Drugs Ab, Helsinki.
Germany	Roussel—Pharma G.m.b.H., Koblenz.
Greece	Mr. J. B. Lavidas, Athens
Ireland	Messrs May Roberts (Ireland) Ltd., Dublin.
Italy	Laboratori Farmaceutici Maestretti SpA., Milan.
Spain	Laboratorios Amor Gil S.A., Madrid.
Sweden	A. Johnson & Co., Malmo.
Switzerland	Laboratoires Roussel, Geneva. Laboratoires de l'I.S.H., Geneva.
Turkey	Société Turkfarma, Istanbul.

AFRICA

Algeria	Sté Algérienne des Laboratoires Roussel, Algiers.
British East Africa	International Products Ltd., Nairobi.
Central Africa Federation	Fisons Chemicals (S.A.) (Pty) Ltd., Salisbury.
Congo	Rephar, Leopoldville.
Eritrea	Paul Ries & Sons (Ethiopia) Ltd., Asmara.
Ethiopia	Paul Ries & Sons (Ethiopia) Ltd., Addis-Ababa.
Ghana	Kingsway Chemists Ltd., Tamale.
Libya	M. Guido Journo, Tripoli.
Malta	Maurice de Giorgio, Valletta.
Morocco	Société Marocaine des Laboratoires Roussel, Casablanca.

Nigeria	●	Kingsway Chemists Ltd., Lagos.
Republic of Congo	●	Centre Roussel, Brazzaville.
Republic of Malagasy	●	Centre Médical Roussel, Tananarive.
Republic of Senegal	●	Centre Roussel, Dakar.
Republic of Sudan	●	Franco Pinto (Sudan) Ltd., Khartoum.
Sierra Leone	●	Kingsway Chemist Ltd., Freetown.
South Africa	●	Fisons Chemicals (S.A.) (Pty) Ltd., Johannesburg.
Tunisia	●	Office des Spécialités Pharmaceutiques, Tunis.
U.A.R.	●	Docteur Salah Hamza, Cairo.

AMERICA

Argentina	●	Lab. Bioquimico-Farmaceuticos Lutetia, Buenos-Aires.
Bolivia	●	Titeux-Export, Paris.
Brazil	●	Laboratorios Silva Araujo Roussel S.A., Rio-de-Janeiro.
British Guiana	●	J. Jaikaran & Sons Ltd., Georgetown.
Canada	●	Roussel (Canada) Limitee, Montreal.
Columbia	●	Instituto Medico Tecnico Sanicol, S.A., Bogota.
Costa-Rica	●	Lic. Rodolfo Sanchez Barahona, San José.
Dominican Republic	●	Bourgeois & Enfroy. Ciudad Trujillo.
French Antilles	●	Société Antillaise des Laboratoires Roussel, Fort-de-France.
Guatemala	●	Sr. Enrique Alvarado Barrios, Guatemala-City.
Haiti	●	MM. Joseph Nadal & Cie, Port-au-Prince.
Honduras	●	Sres Rivera y Cia, Tegucigalpa.
Jamaica	●	The Real Service Corporation, Kingston.
Mexico	●	Grupo Roussel S.A., Mexico.
Nicaragua	●	Sr. Leopoldo Riestra E., Managua.
Panama	●	Sres R. Agostini S.A., Panama.
Paraguay	●	J. Thomas Acosta E. Hijo, Asuncion.
Peru	●	Laboratorios Roussel Peru S.A., Lima.

Salvador	●	Felix Cristiani y Cia, San Salvador.
Trinidad	●	The Trinidad Pharmacy Ltd., Port-of-Spain.
United States	●	Roussel Corporation, New York.
Uruguay	●	Labur S.A., Montevideo.
Venezuela	●	Roussel de Venezuela S.A., Caracas.

ASIA

Afghanistan	●	Cina Company Ltd., Kabul.
Burma	●	Shwe Mya Stores Ltd., Rangoon.
Cambodia	●	Les Laboratoires Roussel, Phnom-Penh. Société d'Importation de Produits Pharmaceutiques, S.I.P.P., Phnom-Penh.
Ceylon	●	Mssrs. K. W. Perera & Sons Ltd., Colombo.
Hong-Kong	●	Russel Co. Ltd., Hong-Kong.
Iran	●	Iran-Ban Co., Ltd., Teheran.
Iraq	●	H. Mohammed Rashid Hussain & Co., Baghdad.
Japan	●	Nippon Roussel K. K., Tokyo.
Jordan	●	Medical Products Co. Ltd., Amman.
Lebanon	●	MM. Abela Freres, Beirut.
Phillipines	●	Oceanic Commercial Inc., Manila.
Qatar	●	Ahmed Khahil Albaker, Doha.
Saudi Arabia	●	Arabian Medical and Pharmaceutical Co., Djeddah.
South Viet-Nam	●	Roussel Viet-Nam, Saigon. Uffarma, Saigon.
Syria	●	Société (Mercury) Syrienne pour le Commerce & l'Industrie, Damascus.
Thailand	●	International Pharmaceuticals Ltd., Bangkok.
Yemen	●	Paul Ries & Sons (Aden) Ltd., Aden.

OCEANIA

Australia	●	Roussel Pharmaceuticals (Pty) Ltd., New South Wales.
New Zealand	●	Roussel (N.Z.) Limited, Auckland.
Fiji	●	Boots, the Chemists (Fiji) Ltd., Suva.

Table of contents

Bi-decortisyl

b

BI-DECORTISYL is a combination in equal parts of Prednisone and Prednisolone designed to yield uniformly good results by eliminating possible variations in individual response, which have been observed when either steroid is used singly.

BI-DECORTISYL has powerful anti-inflammatory and anti-allergic properties; in therapeutic doses, sodium and water retention and potassium excretion do not occur.

Composition and Presentation

Vials of 10 and 20 tablets, each tablet containing:

Prednisone ... 2·5 *mg.*
Prednisolone ... 2·5 *mg.*

Indications

▸ **Rheumatology**

◆ rheumatic fever ◆ rheumatoid arthritis ◆ ankylosing spondylo-arthritis ◆ chronic polyarthritis in children ◆ acute gout ◆ scapulo-humeral periarthritis ◆ Paget's disease ◆ bursitis ◆ fibrositis ◆ tendinitis ◆ cervico-brachial neuralgia ◆ lumbo-sciatica.

▸ **Allergology - Dermatology**

◆ status asthmaticus ◆ acute attacks of asthma ◆ asthma with continuous dyspnea ◆ chronic ...

asthma ◆ infantile asthma ◆ seasonal rhinitis ◆ reactional dermatoses such as urticaria, angioneurotic edema ◆ drug eruptions ◆ snake-bites ◆ spider-stings ◆ psoriasis ◆ serum sickness ◆ contact dermatitis ◆ atopic eczema ◆ exfoliative dermatitis ◆ pemphigus ◆ neurodermatitis ◆ lichen planus ◆ acute disseminated lupus erythematosus ◆ dermatomyositis ◆ scleroderma ◆ peri-arteritis nodosa.

▸ Endocrinology

◆ adrenogenital syndrome.

▸ Hematology - Cancerology

◆ chronic lymphoid leukemia ◆ chronic myeloid leukemia ◆ Hodgkin's disease ◆ lymphomas ◆ reticulosarcomas ◆ bony, pulmonary and cerebral metastases of cancer of the breast or of the prostate ◆ certain malignant tumours (improved tolerance to X-rays and cytostatics) ◆ blood dyscrasias such as allergic purpura ◆ thrombocytopenic purpura ◆ acquired hemolytic anemia ◆ leucopenia ◆ neutropenia ◆ agranulocytosis.

▸ Pneumology

◆ emphysema and pulmonary fibrosis ◆ pulmonary tuberculosis ◆ serofibrinous pleurisy ...

◆ influenzal pneumonia ◆ sarcoidosis ◆ Loeffler's syndrome ◆ and the various pneumoconioses like bagassosis, berylliosis and silicosis.

▶ **Gastro-enterology**

◆ ascitic cirrhosis ◆ ulcerative colitis ◆ regional ileitis ◆ idiopathic sprue ◆ chronic diarrheas.

▶ **Nephrology**

◆ lipoid nephrosis.

▶ **Ophthalmology**

◆ allergic conjunctivitis ◆ keratitis (with the exception of febrile herpes of the cornea which is a contra-indication) ◆ marginal ulcer of the cornea ◆ iritis ◆ iridocyclitis ◆ secondary glaucoma ◆ sympathetic ophthalmia ◆ choroiditis ◆ optic neuritis ◆ retrobulbar neuritis ◆ retinitis ◆ panophthalmitis ◆ corneal vascularisation.

▶ **Oto-rhino-laryngology**

◆ facial paralysis ◆ nasal polyposis ◆ laryngeal edemas.

▶ **Infectious Diseases** (*under antibiotic cover*) •••

b

- typhoid - brucellosis - septicemia - acute pulmonary infections - viral hepatitis - infectious mononucleosis - meningitis - encephalitis - chronic bronchitis and broncho-pneumopathies.

Cardiology

- rheumatic cardiopathies - endocarditis (in case of antibiotic-resistance and complemented by massive antibiotherapy) - pericarditis - cor pulmonale (cardiac insufficiency of chronic broncho-pneumopathy) - congestive cardiac failure (restoration of sensitivity to cardiotonics and diuretics) - myocardial infarction (with anticoagulants).

Neurological Syndromes

- chorea - multiple sclerosis.

Posology

For *Adults*:

INITIAL DOSAGE is usually from 20 to 40 mg. daily, but it may be higher—up to 80 mg. daily, if necessary. The initial dosage is continued for 2 to 3 days or till after a definite remission occurs, before reducing it to a maintenance dosage (usually 5 to 6 days in all).

MAINTENANCE DOSAGE (the minimal effective amount) is usually from 5 to 20 mg. daily, reached in about 2 weeks by gradual reductions of 2.5 mg., two to three times a week. ...

Bi-decortisyl
(contd.)

For *Children:*

INITIALLY — ½ mg. per kg. daily. As in adults, this dosage can be doubled or trebled if necessary.

MAINTENANCE - ⅛ to ¼ mg. per kg. daily.

Precautions

Clinical and biological surveillance (E.S.R., Thorn's Test, Glycemia, Glycosuria, etc.). The diet should be rich in animal proteins and poor in fats and carbohydrates. Moderate amounts of salt may be taken in doses not exceeding 30 mg. per day. A salt-free diet is advised at higher doses.

Adjuvant Medication

Male hormone (*Sterandryl Retard*), Vitamin C and Antacids.

Eventually, depending on therapeutic requirements, the following may be needed: hypoglycemiants, mild hypnotics, antibiotics, diuretics, potassium salts, anti-coagulants, Vitamin D_2 (*Sterogyl-15*).

②

Cortasmyl

C

CORTASMYL is a synergistic combination of Prednisone with the classical anti-asthmatic remedies. The inclusion of Prednisone in the formula reduces the therapeutically effective doses of the other ingredients, making the product both effective and well-tolerated in the day to day treatment of asthma of moderate severity.

Composition

Each tablet contains:

Prednisone	*1·5 mg.*
Ephedrine Hydrochloride	*10 mg.*
Theophylline	*80 mg.*
Phenobarbital	*10 mg.*

Presentation

Vial of 20 tablets.

Indications

- asthma of moderate severity (prophylaxis and treatment)

  (For the treatment of status asthmaticus and severe attacks of asthma, *BI-DECORTISYL* or *DEXA-CORTISYL/DEXACORTISYL PLUS* should be used in full dosage.)

- emphysema

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- chronic bronchitis (with antibiotics)
- silicosis, anthracosis and the various pneumoconioses.

Posology and Mode of Use

The average adult dosage is one tablet thrice daily, but this may be increased or decreased gradually according to response.

For children over three years of age, 1 tablet a day is usually sufficient.

CORTASMYL should be given in divided doses at regular intervals during the day, after meals and at bed-time.

A gradual reduction of the dosage over a number of days is the correct method of terminating a course of treatment.

(3)

Cortisone Roussel Injectable

C

CORTISONE ROUSSEL INJECTABLE is a microcrystalline suspension of Cortisone acetate. This form permits the administration (intramuscular) of Cortisone to infants, young children and to patients who, being in coma or exhibiting gastric intolerance, are unable to swallow the tablets.

In many conditions where parenteral corticotherapy is called for, there exists a state of shock and collapse. The sodium and water-retaining properties of Cortisone are beneficial in these cases.

Composition

11-*dehydro*-17-*hydroxycorticosterone acetate.*

Presentation

CORTISONE ROUSSEL INJECTABLE is presented in multidose vials of 10 *ml. of a microcrystalline suspension of Cortisone acetate in a strength of* 25 *mg. per ml.*

Indications

▸ *Rheumatic affections:*

◆ rheumatic fever ◆ rheumatoid arthritis ◆ ankylosing spondylo-arthritis ◆ arthrosis. •••

Cortisone Roussel Injectable
(contd.)

C

- *Allergic disorders:*
  ◆ status asthmaticus ◆ anaphylaxis ◆ angioneurotic edema ◆ drug sensitivity reactions.

- *Skin and collagen disorders:*
  ◆ disseminated lupus erythematosus ◆ scleroderma ◆ eczemas ◆ Besnier-Bœck-Schaumann's sarcoidosis.

- *Endocrine diseases:*
  ◆ Addison's disease ◆ secondary functional adrenocortical insufficiency.

- *Blood diseases:*
  ◆ acquired hemolytic anemia ◆ hemolytic disease of the new-born ◆ thrombocytopenic purpura ◆ leukemia.

- *Infections* (in association with antibiotics):
  ◆ typhoid ◆ meningitis ◆ brucellosis ◆ diphtheria ◆ tetanus ◆ small-pox.

- *Various affections:*
  ◆ Dehydration syndromes ◆ shock and collapse.

Posology

The dosage varies according to the condition to be treated. In conditions which are self-limited, the duration of treatment is short, affording the organism ...

the characteristic non-specific protection. Used with standard measures of supportive treatment, *CORTISONE* therapy can be life-saving.

Prolonged Treatment (Rheumatology, Dermatoses and Allergies): The dosage in adults is 200 to 300 mg. daily for the first 2 days; then 100 to 150 mg. to be tapered off to a maintenance dosage level (60 to 75 mg.) which keeps the patient symptom-free in chronic affections.

In Addison's disease (substitution therapy), the dosage is 10 to 25 mg. per day.

Short-term Treatment (Infectious diseases and Shock): The total duration of treatment is 5 to 6 days. The dosage is 200 to 300 mg. on the first day, 100 to 200 mg. on the second day, 50 to 100 mg. on the third day, and 25 mg. per day on the following days. In all cases of infections, full antibiotic cover is necessary.

The daily dose may be administered in one injection (deep intramuscular) or divided in 4 to 6 equal parts.

Precautions to be Observed

(*a*) Careful medical supervision.

(*b*) Strict asepsis in giving the injections.

(*c*) A salt-free diet except in Addison's disease.

(*d*) A diet rich in proteins and with low fat-content.

(*e*) Adjuvant medication should consist of potassium salt, vitamin C, male hormone and antacids.

(4)

Decaserpyl
Decaserpyl Plus

DECASERPYL is a powerful hypotensive compound without side-effects on the central nervous system like drowsiness and mental depression.

DECASERPYL lowers both systolic and diastolic blood pressures; the drop is gradual and sustained. The excellent tolerance to *DECASERPYL* permits the physician to reach effective hypotensive levels safely.

In *DECASERPYL PLUS*, the powerful hypotensive action of *DECASERPYL* is reinforced by the addition of Benzthiazide to increase the hypotensive activity and extend the therapeutic range to include many severe cases of hypertension. Potassium chloride is added to compensate for potassium diuresis which may occur with Benzthiazide in high dosage or prolonged treatment.

Composition and Presentation

Decaserpyl

Vial of 30 tablets, each containing:

Methoserpidine ... ... 5 *mg.*

Decaserpyl Plus

Vial of 20 tablets, each containing:

Methoserpidine ... ... 10 *mg.*
Benzthiazide ... ... 20 *mg.*
Potassium chloride ... ... 250 *mg.*

d

Indications

Decaserpyl

- Essential hypertension
- Renal hypertension.
- Hypertension in pregnancy.

Decaserpyl Plus

- Essential hypertension (moderate and severe cases).

Posology and Mode of Use

Decaserpyl

Initially, 30 mg. daily (two tablets thrice daily).

Subsequently, depending on the results obtained at the end of about 10 days, reduce by steps of 5 mg. every 3 days to not less than 15 mg. daily or increase by steps of 10 mg. to a dosage of 40-60 mg. per day.

Ambulant patients generally require 20 to 25% higher dosage than patients treated in bed.

Decaserpyl Plus

Initially, 1 tablet three times daily.

The maintenance dosage which lies within the range of 1-5 tablets daily should be established by weekly adjustments.

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Precautions

When mild renal failure is suspected or present *DECASERPYL PLUS* should be given for 5 days a week in courses of 2 weeks' duration, alternating treatment with plain *DECASERPYL*.

DECASERPYL PLUS is contra-indicated in advanced renal disease.

A sudden fall of blood pressure should be avoided in patients with advanced cerebral or coronary artery disease.

(5) # Dexacortisyl
Dexacortisyl Plus

d

DEXACORTISYL is a powerful anti-inflammatory corticosteroid, the active principle of which is Dexamethasone-21-acetate.

DEXACORTISYL is 7 to 8 times more potent than Prednisone or Prednisolone. At the same time it does not cause sodium and water-retention and has reduced potassium-excretory and diabetogenic effects. The presentation of Dexamethasone in an esterified form in *DEXACORTISYL* ensures even absorption, spread-out action and round-the-clock utilisation of the steroid principle.

DEXACORTISYL PLUS is *DEXACORTISYL* to which have been added certain adjuvant medicaments, essential for safety in long term/high dosage corticotherapy.

Composition and Presentation

DEXACORTISYL

Vials of 10, 100 and 500 tablets, each containing:

Dexamethasone acetate	*0·553 mg.*

DEXACORTISYL PLUS

Vial of 10 tablets, each containing :

Dexamethasone acetate	0·553 *mg.*
Calcium ascorbate	50 *mg.*
Vitamin D_2	300 *I.U.*
Aluminium hydroxide gel	250 *mg.*

...

d

Indications

Rheumatology

◆ rheumatic fever ◆ rheumatoid arthritis ◆ ankylosing spondylo-arthritis ◆ chronic polyarthritis in children ◆ acute gout ◆ scapulo-humeral periarthritis ◆ Paget's disease ◆ bursitis ◆ fibrositis ◆ tendinitis ◆ cervico-brachial neuralgia ◆ lumbo-sciatica.

Allergology - Dermatology

◆ status asthmaticus ◆ acute attacks of asthma ◆ asthma with continuous dyspnea ◆ chronic asthma ◆ infantile asthma ◆ seasonal rhinitis ◆ reactional dermatoses such as urticaria, angioneurotic edema ◆ drug eruptions ◆ snake-bites ◆ spider-stings ◆ psoriasis ◆ serum sickness ◆ contact dermatitis ◆ atopic eczema ◆ exfoliative dermatitis ◆ pemphigus ◆ neurodermatitis ◆ lichen planus ◆ acute disseminated lupus erythematosus ◆ dermatomyositis ◆ scleroderma ◆ peri-arteritis nodosa.

Endocrinology

◆ adrenogenital syndrome.

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Dexacortisyl
Dexacortisyl Plus
(contd.)

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Hematology - Cancerology

◆ chronic lymphoid leukemia ◆ chronic myeloid leukemia ◆ Hodgkin's disease ◆ lymphomas ◆ reticulosarcomas ◆ bony, pulmonary and cerebral metastases of cancer of the breast or of the prostate ◆ certain malignant tumours (improved tolerance to X-rays and cytostatics) ◆ blood dyscrasias such as allergic purpura ◆ thrombocytopenic purpura ◆ acquired hemolytic anemia ◆ leucopenia ◆ neutropenia ◆ agranulocytosis.

Pneumology

◆ emphysema and pulmonary fibrosis ◆ pulmonary tuberculosis ◆ serofibrinous pleurisy ◆ influenzal pneumonia ◆ sarcoidosis ◆ Loeffler's syndrome ◆ and the various pneumoconioses like bagassosis, berylliosis and silicosis.

Gastro-enterology

◆ ascitic cirrhosis ◆ ulcerative colitis ◆ regional ileitis ◆ idiopathic sprue ◆ chronic diarrheas.

Nephrology

◆ lipoid nephrosis.

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d

- **Ophthalmology**
  ⌁ allergic conjunctivitis ⌁ keratitis (with the exception of febrile herpes of the cornea which is a contra-indication) ⌁ marginal ulcer of the cornea ⌁ iritis ⌁ iridocyclitis ⌁ secondary glaucoma ⌁ sympathetic ophthalmia ⌁ choroiditis ⌁ optic neuritis ⌁ retrobulbar neuritis ⌁ retinitis ⌁ panophthalmitis ⌁ corneal vascularisation.

- **Oto-rhino-laryngology**
  ⌁ facial paralysis ⌁ nasal polyposis ⌁ laryngeal edemas.

- **Infectious Diseases** (*under antibiotic cover*)
  ⌁ typhoid ⌁ brucellosis ⌁ septicemia ⌁ acute pulmonary infections ⌁ viral hepatitis ⌁ infectious mononucleosis ⌁ meningitis ⌁ encephalitis ⌁ chronic bronchitis ⌁ bronchopneumopathies.

- **Cardiology**
  ⌁ rheumatic cardiopathies ⌁ endocarditis (in case of antibiotic-resistance and complemented by massive antibiotherapy) ⌁ pericarditis ⌁ cor pulmonale (cardiac insufficiency of chronic bronchopneumopathy) ⌁ congestive cardiac failure (restoration of sensitivity to cardiotonics and diuretics) ⌁ myocardial infarction (with anticoagulants).

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- **Neurological Syndromes**
  - chorea - multiple sclerosis.

Posology

The dosage for *DEXACORTISYL* and *DEXACORTISYL PLUS* in terms of Dexamethasone content is on an average, as follows:

	Adults		Children	
	Initial treatment	*Maintenance treatment*	*Initial treatment*	*Maintenance treatment*
Chronic Affections	2 to 4 mg.	0.5 mg. to 1.5 mg.	1/10 mg./kg.	
Acute Affections	4 to 6 mg.	0.5 mg. to 1.5 mg.	1/4 mg./kg.	
Acute Articular Rheumatism, Collagen Diseases	6 to 10 mg.	2 to 4 mg.	1/4 to 1/2 mg./kg.	Reduce the initial dosage by 50 to 75%
Blood Dyscrasias	10 to 20 mg.	2 to 4 mg.	1/2 mg./kg.	
Adrenopituitary inhibition	1 to 1.5 mg.	0.5 to 1 mg.	1/4 mg./kg.	1/4 mg.

The daily dosage should be divided into 4 to 6 regularly spaced intakes.

The tablets should be swallowed whole with a little water. ●●●

Transfer from other Glucocorticoids

Continuity of treatment should be ensured with equivalent dosages of *DEXACORTISYL*, bearing in mind that *DEXACORTISYL* is 7-8 times more powerful than Prednisolone, 4-6 times more powerful than Triamcinolone and at least 30 times more powerful than Hydrocortisone.

Precautions

Clinical and biological surveillance (E.S.R., Thorn's test, glycemia, glycosuria, etc.). Diet should be rich in animal proteins, poor in fats and carbohydrates.

Adjuvant Medication

The prescription of *DEXACORTISYL PLUS* generally dispenses with the usual adjuvant medication such as calcium salts, Vitamin C, Vitamin D and antacids, but the usual precautions during corticotherapy are still applicable. Depending on therapeutic requirements, the following may be administered: male hormone (*STERANDRYL RETARD*), hypoglycemiants, mild hypnotics, antibiotics, anticoagulants, potassium salts, etc.

(6)

Ethinestryl

e

ETHINESTRYL is the most potent orally active estrogen so far known. It is obtained by the substitution of a hydrogen atom by an ethinyl group at the 17-position of alpha-estradiol, the natural follicular hormone.

Composition and Presentation

Box of 30 tablets,
each containing 0·01 mg. of ethinyl estradiol.
Box of 15 tablets,
each containing 0·05 mg. of ethinyl estradiol.

Indications and Posology

♦ *Amenorrhea*

ETHINESTRYL 0·05 mg. : 1 tablet to be given once or twice a day for 20 days followed by *LUTONESTRYL*—4 tablets a day for 5 consecutive days or 1 injection per day on 2 consecutive days. The treatment is to be repeated 7 days after the completion of the first course, for 3-4 cycles.

♦ *Dysmenorrhea*

ETHINESTRYL 0·05 mg. : 1 tablet per day for 20 days starting from the 5th day of the cycle for 2 cycles. Repeat after a month if the pain persists.

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♦ *Menopause*

ETHINESTRYL 0·05 mg. : 1 tablet per day for 15 days followed by a treatment-free interval of 15 days. This regimen is repeated till the symptoms disappear.

♦ *Leucorrhea*

ETHINESTRYL 0·05 mg. : 1 tablet per day from the 8th to the 25th day of each cycle.

♦ *Habitual Abortion* (Prophylaxis)

ETHINESTRYL 0·05 mg. : 2 tablets per day from the onset of pregnancy increasing the dosage according to the evolution. Progesterone may be combined with an estrogen (*LUTONESTRYL*) if the urinary excretion of pregnanediol is low.

♦ *Threatened Abortion*

The emergency treatment consists of the administration of 20 tablets per day of *ETHINESTRYL* 0·05 mg. Depending upon the data provided by the hormonal assays, *LUTONESTRYL* is given in a dosage of 1 injection every 24 hours till the bleeding is checked.

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◆ *Inhibition of Lactation*

ETHINESTRYL 0·05 mg. : 6 tablets a day for 3 days followed by a progressive reduction of dosage.

◆ *Cancer of the Prostate*

ETHINESTRYL 0·05 mg: 10 to 20 tablets per day for 20 to 30 days followed by 1 to 2 tablets daily indefinitely.

◆ *Acne*

In girls:
ETHINESTRYL 0·01 mg.: 1 to 2 tablets a day for 15 days in every cycle (8th to 23rd day) till the symptoms are checked.

In boys:
ETHINESTRYL 0·01 mg. : 1 to 2 tablets a day for 15 days each month, keeping a periodic check on possible mammary reactions.

Geronyl

GERONYL is a combination of substances acting together to oppose involutional and degenerative changes occurring in elderly patients, cachectic individuals, persons suffering from debilitating disease and in convalescents following illness or surgery.

Methyl androstanolone, Methyl testosterone and Vitamin B_{12} impart powerful protein-anabolic properties. Ethinyl estradiol has anti-atheromatous properties; in conjunction with the male hormone it permits endosteal bone formation, promotes tegumentary and vascular integrity and the formation of new tissue. Thiamine hydrochloride facilitates carbohydrate metabolism. Glutamic acid plays an essential role in the metabolism of nerve tissue and Methamphetamine hydrochloride combats depression and fatigue.

Composition and Presentation

Vial of 30 tablets, each containing:

Methyl androstanolone	*2 mg.*
Methyl testosterone	*2 mg.*
Ethinyl estradiol	*0·003 mg.*
Vitamin B_1	*2·5 mg.*
Vitamin B_{12}	*20 mcg.*
Glutamic Acid	*50 mg.*
Methamphetamine hydrochloride	*1 mg.*

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Geronyl
(contd.)

Indications

- senile and pre-senile conditions
- male and female climacteric
- debilitating diseases
- convalescence after illness or surgical procedures
- depressive and asthenic conditions
- osteoporosis.

Posology

The treatment should be started with ½ tablet in the morning and noon before food. According to results obtained at the end of a week, the dosage may be increased to 1 tablet in the morning and 1 tablet at noon before food. The maximum recommended dosage is 2 tablets in the morning and 2 tablets at noon.

Hydrocortisone Roussel
Collyrium
Hydrocortisone Roussel
Ophthalmic Ointment

HYDROCORTISONE Acetate when applied locally exerts on the tissues an anti-inflammatory effect which can be widely employed in Ophthalmology.

HYDROCORTISONE COLLYRIUM and *HYDROCORTISONE OPHTHALMIC OINTMENT* are indicated in the local treatment of inflammatory and allergic disorders of the anterior segment of the eye.

The Collyrium is intended particularly for the treatment of acute and sub-acute affections while the ointment, due to the slow liberation of its active principle, permits spaced applications in chronic affections.

Composition and Presentation

HYDROCORTISONE COLLYRIUM

Dropper vial containing 3 ml. of 1% suspension of Hydrocortisone acetate.

HYDROCORTISONE OPHTHALMIC OINTMENT

Tube of 3 gms. of ointment containing 0·5% of Hydrocortisone acetate.

Hydrocortisone Roussel Collyrium
Hydrocortisone Roussel Ophthalmic Ointment
(contd.)

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Indications

- blepharitis - eczema of the eyelids
- conjunctivitis
- scleritis - episcleritis
- keratitis
- iritis - iridocyclitis
- physical and chemical burns of the cornea and conjunctiva
- corneal injuries
- post-operatively in ocular surgery.

Contra-indications

Tuberculous and herpetic keratitis.

Posology

HYDROCORTISONE COLLYRIUM

Treatment during the acute phase consists of instillation of 1-2 drops between the eyelids every 1 to 3 hours during the course of 3 to 4 days. Consolidation of the treatment is carried out by instillation of 1-2 drops thrice a day during 1 to 3 weeks.

HYDROCORTISONE OPHTHALMIC OINTMENT

A small quantity of the ointment to be applied once or twice a day in the conjunctival sac or on the eyelids in case of palpebral lesions.

In cases of infection, local or systemic antibiotherapy is indispensable during the first one or two days.

Hydrocortisone Roussel Injectable

Hydrocortisone has a wide field of application in local treatments due to its anti-inflammatory, anti-allergic, anti-exudative and anti-fibroblastic properties.

HYDROCORTISONE ROUSSEL INJECTABLE is a 2·5% suspension of Hydrocortisone acetate which can be utilised by intra-articular, intra-dermal, sub-cutaneous, intra-cavitary or intra-spinal injections, by local instillations, painting and by aerosols or spray.

The action of *HYDROCORTISONE ROUSSEL INJECTABLE* is limited to the area treated and is not accompanied by endocrine or metabolic repercussions of a general nature. The microcrystalline suspension provides long-lasting local effects in contra-distinction to the soluble esters of corticosteroids which rapidly pass into the circulation.

Composition and Presentation

HYDROCORTISONE ROUSSEL 125 mg.

5 ml. multidose vial containing 125 mg. of 17-hydroxy-corticosterone acetate in 2·5% injectable suspension.

HYDROCORTISONE ROUSSEL 25 mg.

1 ml. vial containing 25 mg. of 17-hydroxy-corticosterone acetate in 2·5% injectable suspension.

Indications, Posology and Mode of Use

▸ Rheumatology

Technique — *Intra-articular injections*
Peri-articular injections
Injections at the site of pain.

Dose — *0·2 to 2 ml. according to the size of the ioint to be treated.*

Frequency — *Depending upon the duration o the remission, generally once a week.*

- arthrosis ◆ hydrarthrosis
- chronic evolutive polyarthritis
- ankylosing spondyloarthritis
- painful sequelæ of infective rheumatism (under cover of antibiotics whenever necessary)
- scapulo-humeral periarthritis
- bursitis ◆ tendinitis ◆ synovitis
- tenosynovitis ◆ synovial cysts
- apophysitis ◆ epicondylitis ◆ styloiditis
- pain in the ankle ◆ sprains ◆ arthritis and brachialgia due to pneumatic tools ◆ Heberden's nodes ◆ Bouchard's nodes.

▸ Dermatology

Technique — *Sub-cutaneous infiltrations*
Intra-dermal injections.

Dose — *⅛ to ½ ml.*

Frequency — *Weekly*

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This mode of administration is indicated when the percutaneous penetration is reduced in case of lichenification, for instance.

The affections justifying such a treatment are the same as those that benefit from applications of the ointment.

▸ Affections with Fibrous Tendency

Technique — *Intra-nodular injections*
Peri-nodular injections.

Dose — *0·5 to 1 ml.*

Frequency — *Weekly.*

⟡ keloids ⟡ cicatricial stenosis
⟡ Dupuytren's contracture
⟡ Peyronie's disease (induration of the corpus cavernosus) ⟡ urethral stricture.

▸ Oto-Rhino-Laryngology

Technique — *Sub-mucous injections*
Intra-sinusal injections
Trans-tympanic injections.

Dose — *0·5 to 1 ml.*

Frequency — *Weekly.*

⟡ allergic rhinitis ⟡ nasal polyposis ⟡ chronic maxillary sinusitis in children ⟡ tubo-tympanic catarrh.

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Ophthalmology

Technique — *Sub-conjunctival injections*
Intra-camerular injections
Retro-bulbar injections.

Dose — *0·2 to 0·4 ml.*

Frequency — *depending upon the clinical results (weekly or fortnightly)*

- conjunctivitis and kerato-conjunctivitis
- scleritis - episcleritis - keratitis
- iridocyclitis - sympathetic ophthalmia
- corneo-crystalline trauma
- post-operative sequelæ of cataract
- chorio-retinitis.

Gynecology and Urology

Technique — *Intra-utero-tubal injections*
Intra-vesical injections
Intra-pelvic injections.

Dose — *1 to 5 ml.*

Frequency — *Weekly.*
(in association with antibiotherapy)

- tubal stenosis - interstitial cystitis.

Neurology

Technique — *Intrathecal injections*
Sub-occipital injections
Intra-ventricular injections.

Dose — *0·5 to 1 ml.*

Frequency — *daily, for a few days.*

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- tuberculous meningitis
- purulent meningitis
  (Prevention or resolution of septation)

Technique — *Intra-spinal injections*
Epidural injections.

Dose — *1 to 2 ml.*

Frequency — *Weekly.*

- lumbar pains - sciatica
- cervico-brachial, intercostal or crural neuralgia - zosteroid pains - pains from neurinomas.

Technique — *Intrathecal injections*
Local infiltrations.

Dose — *2 to 5 ml.*

Frequency — *Weekly or fortnightly.*

- multiple sclerosis - paraplegia
- quadriplegia - pyramidal sequelæ
- tabes dorsalis (fulminating pains, gastric attacks) - painful stump.

Internal Medicine

Technique — *Intra-cavitary injections.*

Dose — *1 to 5 ml.*

Frequency — *daily, for a few days.*

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- pleurisy - pericarditis
- ascites with clear fluid.

Technique — *Oral administration in association with a gastric dressing.*

Dose — *5 to 10 drops*

Frequency — *thrice a day.*

- Allergic gastritis

Technique — *Retention enema.*

Dose — *5 ml. in 20 to 50 ml. of normal saline*

Frequency — *depending upon the results — weekly or fortnightly.*

- recto-colitis - rectitis
- sigmoiditis.

Stomatology

Technique — *Intra-cavitary dressings*
Painting
Peri-alveolar injections.

Dose — *0·2 to 0·4 ml.*

Frequency — *Once a week on an average.*

- pulpitis - gingivitis - stomatitis
- allergic reactions to dentures
- alveolo-dental pyorrhea - parodontitis.

Hydrocortisone Roussel Intravenous

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HYDROCORTISONE ROUSSEL INTRAVENOUS provides to the organism an immediate and massive gluco-corticoid support in all conditions which call for emergency corticotherapy. Apart from its anti-inflammatory and anti-allergic properties, its anti-shock action often proves life-saving.

Composition

Double succinate of hydrocortisone and sodium.

Presentation

Box containing:

— 2 ampoules of 5 ml., each containing 25 mg. of hydrocortisone hemisuccinate in solution in 1 ml. of anhydrous solvent.

— 2 ampoules of 4·5 mg. of sodium bicarbonate in solution in 4 ml. of distilled water.

The double succinate of hydrocortisone and sodium is obtained instantaneously by introducing the contents of an ampoule of sodium bicarbonate into an ampoule of hydrocortisone hemisuccinate (25 mg. of active hormonal principle in 5 ml. of solution).

Indications

- States of shock associated with surgery, obstetrics, blood transfusions, severe trauma, severe burns, drowning, etc.

- Cardiovascular collapse caused by severe infectious states and by acute dehydration syndromes.

- Status asthmaticus.

- Cor pulmonale due to chronic respiratory insufficiency.

- Acute adrenocortical insufficiency as it occurs in Addisonian crisis, abrupt interruption of corticosteroid therapy and in shock provoked by Thorn's test in patients with adrenal insufficiency.

- Acute and grave allergic reactions, hyper-reactional dermatoses, transfusional venous reactions and grave Rh accidents in the new-born.

- Acute jaundice, hepatic coma and acute hypoglycemia.

- Surgical intervention during adrenocortical or pituitary insufficiency, adrenalectomy. •••

The above indications for Hydrocortisone Roussel Intravenous are not by any means exhaustive; as a matter of fact, Hydrocortisone Roussel Intravenous may be used in all cases where systemic Corticotherapy is urgently required.

Mode of Use

Draw the contents of the ampoule of bicarbonate solution in a 5 ml. syringe.

Introduce the solution into the ampoule containing hydrocortisone hemisuccinate.

The double succinate of hydrocortisone and sodium is formed extemporaneously by a mere contact between the two solutions.

The mixture with a pH between 6 and 7, absolutely clear, is then ready for the intravenous injection or, according to need, for other uses (aerosol etc.).

The intravenous injection may be administered:

— either directly, without any complementary dilution in a slow injection spread over 4 to 5 minutes.

— or as a prolonged perfusion for several hours in a dilution of 100 mg. in 500 ml. of isotonic saline or glucose according to the case to be treated.

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This mode of administration is suitable particularly for the high doses exceeding 100 mg. or when a widespread effect is desired.

The contents of the ampoule of hydrocortisone hemisuccinate should never be injected prior to mixing with the bicarbonated solution.

Posology

In adults the dosage varies, according to the clinical indications or the severity of the symptoms:

25 mg. (1 ampoule) to 250 mg. (10 ampoules) per day, the initial dose going at times as far as 100 mg. in a single injection.

In children and infants, the dosage is relatively higher:

Up to 8 to 10 mg. per kg. of body weight in infants. Up to 4 to 8 mg. per kg. of weight in grown up children.

Half the daily dosage is generally administered to start with and the remaining in the course of 24 hours at progressively increasing intervals.

The duration of treatment is usually short: 4 to 48 hours, after which corticotherapy may be resumed by the oral route (*DEXACORTISYL, DEXACORTISYL PLUS, BI-DECORTISYL*) or intramuscularly (*CORTISONE ROUSSEL INJECTABLE*).

Hydrocortisone Roussel Skin Ointment

HYDROCORTISONE ACETATE is widely employed in a variety of dermatoses for its anti-inflammatory and anti-allergic properties. Acting at the level of tissues, it promptly checks pruritus, exudation and erythema.

Composition and Presentation

Tube of 3 gms. of ointment containing 1% of Hydrocortisone Acetate.

Indications

- cutaneous allergic reactions ◆ contact dermatitis
- allergic eczema ◆ diathetic eczema ◆ infantile eczema
- seborrheic dermatitis ◆ nummular dermatitis ◆ neurodermatoses
- lichen simplex ◆ dermatitis herpetiformis.
- localised pruritus ◆ ano-genital pruritus
- urticaria ◆ X-ray dermatitis ◆ insect bites
- post-operative dressing in plastic surgery.

Mode of Use

Apply a small quantity of the ointment on the affected region and rub in gently to assist penetration; daily applications initially, followed by 2-3 applications per week.

Antibiotic cover is necessary in case of infection.

Lutonestryl

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LUTONESTRYL is a combination of an estrogen with a progestogen in a certain optimal ratio, which enables the application of the ZONDEK formula in a simple and practical manner. This combination finds many therapeutic applications in Gynecology.

Composition and Presentation

INJECTABLE

Boxes of 2 and 50 ampoules, each ampoule containing:

Progesterone	...	...	...	*20 mg.*
Estradiol benzoate		...	...	*2 mg.*

TABLETS

Box of 20 tablets, each tablet containing:

Anhydroxyprogesterone	...	...	*10 mg.*
Ethinyl estradiol	...	...	*0·01 mg.*

Indications and Posology

Secondary Amenorrhea

OF SHORT DURATION:

LUTONESTRYL Injectable, 1 ampoule a day on each of the two consecutive days or *LUTONESTRYL* 4 tablets a day for 5 consecutive days. A withdrawal bleeding resembling a normal period occurs within a few days. The treatment should be ...

repeated every 28 days counting from the first injection for 3 to 4 cycles.

OF LONG DURATION:

LUTONESTRYL Injectable, 1 ampoule daily on each of the three consecutive days preceded by *ETHINESTRYL* 0·05 mg., 1-2 tablets per day for 20 days, to be repeated 7 days after the first course, for 3 or 4 cycles.

Pregnancy Test

Pregnancy can be excluded if there is a withdrawal bleeding following the two-injection course described for secondary amenorrhea of short duration, while failure to bring about bleeding suggests but does not prove pregnancy.

Habitual Abortion

1 injection of *LUTONESTRYL* every 3rd day or 1 tablet of *LUTONESTRYL* every day from the time of conception up to the sixth month of pregnancy.

Infertility due to failure of nidation

One injection of *LUTONESTRYL* every 3rd day or one tablet a day of *LUTON-* ...

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ESTRYL commencing from the day of ovulation which occurs around the 14th day of the cycle and, if conception takes place, to be continued up to the sixth month of pregnancy as in habitual abortion. If conception does not take place the treatment is to be discontinued when menstruation occurs and then resumed at the next ovulation period for another trial.

▸ **Threatened Abortion**

One injection of *LUTONESTRYL* every 24 hours until pain and hemorrhage subside.

Mode of Use

LUTONESTRYL injections are given intramuscularly. *LUTONESTRYL* tablets may be administered by the oral or sublingual route, preferably either much before or much after food.

Prednisolone Roussel Collyrium

PREDNISOLONE COLLYRIUM is a suspension of Prednisolone acetate, used in the local treatment of inflammatory and allergic disorders of the anterior segment of the eye.

The greater anti-inflammatory, anti-allergic, anti-exudative and anti-fibroblastic properties of *PREDNISOLONE COLLYRIUM* render it useful in conditions which have proved refractory to Hydrocortisone preparations.

The regular local instillation of *PREDNISOLONE COLLYRIUM* is followed by a rapid disappearance of redness, diminution of lacrimation, photophobia and pain, regression of edema and congestion and a fall in the ocular tension. It also prevents neovascularisation and opacity of the cornea.

Composition and Presentation

Dropper vial containing 3 ml. of a 0·5% suspension of Prednisolone acetate.

Indications

- blepharitis - eczema of the eyelids
- conjunctivitis - scleritis - episcleritis
- keratitis - kerato-conjunctivitis
- iritis - iridocyclitis

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- physical and chemical burns of the conjunctiva and cornea ◆ corneal injuries
- post-operative sequelæ of chalazion, pterygium, keratoplasty, cataract, glaucoma strabismus, enucleation.

It is imperative to associate local or systemic antibiotherapy if an infection is simultaneously present or suspected.

Contra-indications

Dendritic keratitis (herpetic keratitis)
Tuberculous keratitis.

Mode of Use

One or two drops are instilled into the eye every hour or every 2 hours in acute affections for 3 to 4 days initially. This is followed by a maintenance therapy of 3 to 4 instillations per day for 1 to 2 weeks.

One or two instillations per day in chronic affections.

It is essential to continue treatment for at least 15 days following the apparent cure in order to avoid relapses. In disorders involving the posterior segment of the eye, systemic corticotherapy (*BI-DECORTISYL, DEXACORTISYL* or *DEXACORTISYL PLUS*) is necessary.

Prednisolone Roussel
Skin Ointment

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PREDNISOLONE SKIN OINTMENT shows, in cutaneous affections, a selective action on the tissues which is 3 to 4 times more powerful than that of Hydrocortisone.

The local application of *PREDNISOLONE SKIN OINTMENT* in inflammatory dermatoses is followed by an immediate disappearance of pruritus, reduction of erythema, drying up of the exudation with a resolution of the underlying edema and an improvement of the general condition.

Composition and Presentation

Tube of 5 grams containing:

Prednisolone Acetate — 0·5%

Indications

⇢ all inflammatory, allergic, pruritic, exudative or erythematous dermatoses of limited extent ⇢ X-ray dermatitis ⇢ recurrent herpes ⇢ insect bites ⇢ sun burns ⇢ post-operatively in plastic surgery.

Mode of Application

Apply a small quantity on the affected region and rub gently to facilitate penetration. Applications to be repeated according to response. *When infection is present or suspected, antibiotherapy should be associated locally or systemically.*

Prednisolone Roussel Tablets

PREDNISOLONE is a dehydrogenated derivative of Hydrocortisone. The introduction of a double-bond in the Hydrocortisone molecule leads to a four-fold increase in the activity of the original hormone.

PREDNISOLONE does not cause sodium and water-retention or potassium-excretion in average dosage.

Composition

Each tablet contains:

Delta-1-dehydrohydrocortisone .. 5 mg.

Presentation

Vial of 10 tablets
Bottle of 100 tablets.

Indications, Posology and Precautions to be Observed

Same as for BI-DECORTISYL.

Proctosedyl

PROCTOSEDYL is an ointment for the local treatment of internal and external hemorrhoids and their complications. The formula has been devised to overcome thrombophlebitis, the cause of hemorrhoids, as well as to obtain symptomatic relief.

Hydrocortisone relieves inflammation, pain, pruritus, edema and exudation. Sodium Heparinate checks thrombophlebitis and reinforces the anti-exudative properties of Hydrocortisone. Soframycin (Framycetin Sulphate) keeps the anal mucosa aseptic. Esculoside, a vitamin P factor increases the vascular resistance of the submucous venous plexus, checking bleeding tendencies. Ethoform and Butoform provide a prompt and prolonged relief from pain. They also diminish the excessive tone of the sphincter.

Composition and Presentation

Tube of 5 gms., each gram containing:

Hydrocortisone	*5 mg.*
Sodium heparinate	*1000 I.U.*
Framycetin sulphate	*10 mg.*
Esculoside	*10 mg.*
Butoform	*10 mg.*
Ethoform	*10 mg.*

Indications

- internal and external hemorrhoids and their complications such as
- strangulated hemorrhoidal prolapse
- anal pruritus
- perineal eczema
- anorectitis and anal fissures
- pre- and post-operatively, in hemorrhoidectomy
- prophylactically, in between attacks.

Mode of Use

Apply a small quantity of the ointment on the painful or pruriginous area. To facilitate application in internal hemorrhoids, a specially devised cannula is provided with each tube.

The applications may be repeated morning and evening, and after defecation, reducing the frequency as improvement occurs.

The ointment does not stain the clothing.

Sofradex Cream

SOFRADEX is a combination of Soframycin and Dexamethasone acetate presented in a vanishing cream base.

SOFRADEX has been designed to provide effective local treatment in the various allergic and infectious disorders of the skin characterised by pruritic, exudative and inflammatory eruptions.

Soframycin is a broad-spectrum antibiotic which is bacteriostatic and bactericidal in low concentrations against gram-positive and gram-negative organisms including Staphylococci resistant to other antibiotics, Pseudomonas pyocyaneus and the Proteus group of organisms. Since this antibiotic is used exclusively locally, the chances of occurrence of sensitisation are remote; systemic antibiotics are spared. Soframycin is well tolerated by the tissues and is stable in aqueous solution even in the presence of blood, pus and serum.

Dexamethasone acetate is a corticosteroid outstanding for its potency and freedom from side-effects. It has powerful anti-inflammatory, anti-pruritic, anti-allergic and anti-exudative properties which are estimated to be 30 times greater than those of hydrocortisone.

Sofradex Cream
(contd.)

Composition and Presentation

Plastic vial containing 3½ grams of cream corresponding to the following formula:

Dexamethasone acetate	... ...	0·1 *gm.*
Soframycin (Framycetin sulphate)	...	1 *gm.*
Excipient q.s.	... ...	100 *gm.*

Indications

Local treatment with SOFRADEX is indicated in all steroid-responsive dermatoses of limited extent associated either primarily or secondarily with infection, such as:

◆ eczemas ◆ atopic dermatitis ◆ contact dermatitis with impetigo ◆ otitis externa ◆ ano-genital pruritus ◆ intertrigo ◆ seborrheic dermatitis ◆ sycosis barbae ◆ pyoderma ◆ drug eruptions ◆ burns ◆ post-operatively in plastic surgery.

Mode of Use

After fixing the cannula, invert the vial. Bring the cream to the neck of the vial and squeeze gently to deliver the required quantity. Apply a small quantity of the cream on the region to be treated after a preliminary cleansing of the lesions. Repeat this application 2-4 times a day in acute affections and then once a day. A mild massage facilitates penetration.

Soframisone Collyrium

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SOFRAMISONE COLLYRIUM is an isotonic suspension of Soframycin and Hydrocortisone designed for the local treatment of allergic and inflammatory disorders of the anterior segment of the eye, associated either primarily or secondarily with infection. The Collyrium is also recommended in certain otological disorders.

Soframycin is a broad—spectrum antibiotic which is bacteriostatic and bactericidal in low concentrations against gram-positive and gram-negative organisms including Staphylococci resistant to other antibiotics, Pseudomonas pyocyaneus, E. coli and the Proteus group of organisms. Since this antibiotic is used exclusively locally, the chances of occurrence of sensitisation are remote; systemic antibiotics are spared. Soframycin is highly soluble in water, is well tolerated by the tissues and is stable in the presence of blood, pus and serum.

The local application of Hydrocortisone in ophthalmic affections is followed by disappearance of redness, relief from pain, foreign body sensation and photophobia, reduction of lacrimation, regression of edema, congestion and neovascularisation of the cornea and conjunctiva and sometimes a pronounced reduction in ocular tension.

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Composition and Presentation

Dropper vial containing 3 ml. of an isotonic suspension of Soframycin 1% and Hydrocortisone 1%.

Indications

In Ophthalmology:

- conjunctivitis - blepharo-conjunctivitis
- kerato-conjunctivitis - keratitis (except herpetic and tuberculous keratitis)
- scleritis - episcleritis - iridocyclitis - iritis
- physical and chemical burns of the cornea
- corneal injuries - post-operative ocular care.

In Otology:

- Chronic otitis media and mastoid cavities
- Otitis externa.

Mode of Use

In the Eye

During the acute phase, *SOFRAMISONE COLLYRIUM* may be instilled hourly or two-hourly reducing the number of applications as the acute manifestations subside.

Thereafter and in chronic affections 2 to 4 applications per day are therapeutically adequate.

In the Ear

SOFRAMISONE COLLYRIUM can be used for instillations in the ear 3 to 4 times daily or used by saturating a gauze-wick kept in the external auditory meatus.

Soframycin Ophthalmic Ointment

SOFRAMYCIN OPHTHALMIC OINTMENT ensures a prolonged local antibiotic action against micro-organisms, especially encountered in ocular infections. The preparation permits the effective treatment of cutaneous lesions of the eyelids and affections of the anterior segment of the eye.

Soframycin is a broad-spectrum antibiotic which is bacteriostatic and bactericidal in low concentrations against gram-positive and gram-negative organisms, including Staphylococci resistant to other antibiotics, Ps. pyocyaneus and the Proteus group of organisms. Since this antibiotic is used exclusively locally, the chances of occurrence of sensitisation are remote; systemic antibiotics are spared. Soframycin is highly soluble in water, is well tolerated by the tissues and is stable in the presence of blood, pus and serum.

Composition and Presentation

Tube of 3 gms. of the Ophthalmic Ointment containing 0.5% Soframycin (Framycetin Sulphate).

Indications

- *Affections of the Eyebrows:*
  - impetigo - folliculitis
  - furuncles - injuries.

...

- *Affections of the Eyelids:*
  - blepharitis ◆ meibomitis
  - chalazion (internal hordeolum)
  - stye (external hordeolum)
  - burns & eczema of the eyelids
  - erysipelas.

- *Other affections:*
  - catarrhal, muco-purulent or purulent conjunctivitis ◆ dacryocystitis ◆ corneal injuries (to prevent superinfection) ◆ scleritis and episcleritis ◆ iridocyclitis ◆ iritis.

Mode of Use

Two to three applications per day are usually sufficient. A small quantity of the ointment should be introduced in the conjunctival sac or applied to the eyelid. The frequency of applications may be decreased as improvement occurs but the treatment should be continued for a few days after the clinical cure.

The slow liberation of the antibiotic ensures effective bacteriostatic and bactericidal concentrations in between the applications.

Sterandryl
Sterandryl Retard

The active principle of *STERANDRYL* is an oil-soluble ester of relatively rapid action, testosterone propionate. The effect is felt within a few hours after injection and persists for 3 to 4 days.

STERANDRYL RETARD consists of an oil-soluble ester, testosterone hexahydrobenzoate which produces a powerful and sustained action over 3 to 4 weeks with a single injection. This duration of action is of special interest in women as it coincides with the normal inter-menstrual period.

Both the products possess the androgenic, protein-anabolic and anti-estrogenic properties characteristic of the male hormone.

Composition and Presentation

STERANDRYL

Box of 4 ampoules, each containing 25 mg. of testosterone propionate.

STERANDRYL RETARD

Box of 2 ampoules, each containing 50 mg. of testosterone hexahydrobenzoate.

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Indications and Posology

In Men:

Male Climacteric (Andropause)

STERANDRYL RETARD—one ampoule every two to three weeks.

Hypogonadism in Adults

STERANDRYL RETARD—one ampoule every two weeks.

Delayed Puberty of Functional Origin

STERANDRYL 25 mg.—One ampoule every third day for two months

or

STERANDRYL RETARD—one ampoule every two weeks

Male Sterility (due to oligospermia)

STERANDRYL 25 mg.—one ampoule every day or every other day for 10 weeks.

Organic Impotence

STERANDRYL 25 mg.—one ampoule every third day for one week followed by

STERANDRYL RETARD—one ampoule every four weeks.

Benign Prostatic Hypertrophy

STERANDRYL 25 mg.—one ampoule every second or third day followed by

STERANDRYL RETARD—one ampoule every two weeks.

In Women:

Meno-Metrorrhagia

STERANDRYL 25 mg.—two ampoules every day until bleeding stops.

STERANDRYL RETARD may then be given as maintenance treatment in a dosage of one ampoule per month.

Hypermenorrhea, Polymenorrhea and Pre-menstrual Syndrome

STERANDRYL RETARD—one ampoule on the 7th day of the cycle.

Pre-Menopausal Hyperestrinic Syndrome

STERANDRYL RETARD—one ampoule every four weeks

Frigidity

STERANDRYL RETARD—one ampoule every four weeks

Breast Cancer

STERANDRYL 25 mg.—two ampoules in one injection every day or every two days.

Uterine Fibroids and Endometriosis

STERANDRYL 25 mg.—one ampoule every week

or

STERANDRYL RETARD—one ampoule every two weeks

•••

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- **Dysmenorrhea**

  STERANDRYL RETARD—one ampoule at the beginning of the cycle.

In Either Sex:

- **Angina Pectoris**

  STERANDRYL 25 mg.—one ampoule every third day

  or

  STERANDRYL RETARD—one ampoule every two weeks

- **Asthenia (Mental and Physical)**

  STERANDRYL RETARD—one ampoule every two to four weeks

- **Cirrhosis of the Liver**

  STERANDRYL 25 mg.—one ampoule daily for 10 days as initial treatment followed by
  STERANDRYL RETARD—one ampoule every two weeks

- **Adjuvant to Suprarenal Corticotherapy**

  STERANDRYL 25 mg.—one ampoule every week

- **Osteoporosis**

  STERANDRYL RETARD—one ampoule every two to four weeks

Mode of Use

Deep intra-gluteal injection.

Sterogyl 15
Sterogyl Drops

Vitamin D, is indispensable for the assimilation and fixation by the organism of the calcium and phosphorus supplied by diet or medication.

The therapeutic usefulness of Vitamin D2 in high doses was first demonstrated by *HARNAPP* in 1936. The field of application of *STEROGYL* 15 which permits the use of Vitamin D2 in high doses has since then enlarged considerably, covering not only the vitaminic but also the pharmacodynamic indications.

STEROGYL DROPS are intended for prophylactic and maintenance therapy.

STEROGYL is calciferol in pure form. In calciferol therapy, a high degree of purity is essential for therapeutic efficacy and good tolerance.

Presentation

STEROGYL 15 '*A*'

Drinkable alcoholic solution (not for injection).

Boxes of 1, 4 & 25 ampoules of 1·5 ml., each containing 6,00,000 I.U. of calciferol.

STEROGYL 15 '*O*'

Injectable and drinkable oily solution. ...

Boxes of 1, 4 & 25 ampoules of 1·5 ml., each containing 6,00,000 I.U. of calciferol. This form is preferable for oral administration to infants and children.

STEROGYL DROPS

Vial of 10 ml. containing 2,00,000 I.U. of calciferol in alcoholic solution.

Mode of Use

Oral administration

The contents of the ampoule should be taken at one time, preferably in the course of a meal, diluted in a small quantity of water or milk.

Parenteral administration

The injection is given deep in the muscle.

The dosage for oral and parenteral administration is the same.

Indications and Posology

- Rickets - Spasmophilia - Tetany

Prophylaxis : 1 amp. every 6 months or 10 to 30 drops per day for 10 days in a month.

Treatment : 1 amp. per week for 1 to 3 weeks.

- Decalcification in pregnant and nursing women

1 amp. weekly for 2 to 4 weeks.

- Delayed consolidation of fractures
  1 amp. fortnightly or monthly.
- Osteoporosis and osteomalacia
  1 amp. weekly for 2 to 4 weeks.
- Delayed dentition
  1 ampoule
- As an adjuvant to systemic corticotherapy
  1 amp. every 2 to 3 months.
- Asthenia and convalescence
  1 amp. weekly for 3 weeks.
- Lupus and skin tuberculosis
  1st month: 1 amp. every 5 days.
  From 2nd to 6th month: 1 amp. weekly.
  From 7th to 12th month: 1 amp. every 10 days.
  From 13th to 24th month: 1 amp. every 15 days.
- Pulmonary tuberculosis
  1 amp. fortnightly or monthly.
- Cold Abscess and Fistulæ
  1 amp. weekly for 4 to 6 weeks.

Note: *In all tuberculous conditions STEROGYL 15 should be considered as an adjuvant to specific treatment.*

- Asthma - Hay Fever
- Urticaria - Eczema - Migraine
  1 amp. weekly for 2 to 3 weeks.

S

- Psoriasis and Para-psoriasis
  1 amp. weekly.

Precautions

The usual therapeutic dosage of Vitamin D is generally well tolerated but there exist sometimes individual variations in tolerance, associated at times with an unknown idiopathic hypercalcemia.

In case there are clinical signs of hypervitaminosis-D such as anorexia, asthenia, nausea, intensive thirst and polyuria, the treatment should be discontinued immediately. Prescription of BI-DECORTISYL or DEXACORTISYL is recommended for hypercalcemia.

The limit of dosage for Vitamin D prescribed by CHARPY is from 1/20th to 1/30th of a mg. (2,000 to 1,333 I.U.) per day per Kg. of body weight. However, the dosage necessary for several days or several weeks according to age can be administered at one time in the form of 1 ampoule of STEROGYL 15 (6,00,000 I.U.)

BIOLOGICAL CONSTANTS

Summary

Biochemical Blood Constants

1 Electrolytes

	mg.‰	mEq‰	Conversion: mg. into mEq‰	Conversion: mEq‰ into mg.‰
Sodium	3150 to 3300	137 to 143	$\frac{\text{mg.‰} \times 1}{23}$	mEq‰ × 23
Potassium	140 to 200	4 to 5	$\frac{\text{mg.‰} \times 1}{39}$	mEq‰ × 39
Calcium	95 to 105	4.75 to 5.25	$\frac{\text{mg.‰} \times 2}{40}$	$\frac{\text{mEq‰} \times 40}{2}$
Magnesium	18 to 25	1.5 to 2	$\frac{\text{mg.‰} \times 2}{24.3}$	$\frac{\text{mEq‰} \times 24.3}{2}$
Chlorine	3500 to 3700	98 to 105	$\frac{\text{mg.‰} \times 1}{35.5}$	mEq‰ × 35.5
Phosphorus (phosphates)	30 to 45	1.75 to 2.3	$\frac{\text{mg.‰} \times 1.8}{31}$	
Bicarbonates (alkaline reserve)	55 to 60 vol.	24.5 to 27	$\frac{\text{vol.\%}}{2.24}$	
Iron	100 to 140 γ/100 ml.			

2 Proteins

1 Total proteins:

75 ± 10 gm.‰ (16 ± 2 mEq ‰)

Out of which:

Albumins : 40 to 50 gm. ‰
Globulins : 25 to 30 gm. ‰

Ratio $\frac{A}{G}$ = 1.2 to 1.6.

2 *Blood urea:*

0.30 ± 0.10 gm. ‰

A routine test, the estimation of blood urea when it exceeds 0.5 gm. per 1,000, should be viewed critically. In addition to laboratory errors, a large number of causes may induce a rise in blood urea unconnected with chronic nephritis with uremia. Conversely a normal blood urea does not guarantee renal integrity.

Consequently:

- repeat the estimation;
- question the patient on his diet (hyper-proteinic diet)
- detect possible dehydration (vomiting, diarrhea, diuretic treatment)
- consider the possibility of an infection.

When the extra-renal causes have been eliminated, hyperazotemia, in order to acquire its full significance, should be supplemented by renal functional tests.

3 *Uric Acid:*

40 ± 10 mg. ‰

(Varies widely according to the diet)

4 *Total Creatinine:*

(Creatine + Creatinine) : **40 to 50 mg. ‰**

A very stable constant, a rise in which denotes a deficiency in renal clearance.

5 *Fibrin:*

3 to 4 gm. ‰

Rises in rheumatic fever and acute pneumopathies.
Drops in hepatic involvement.

6 *Electrophoresis:*

a Technique

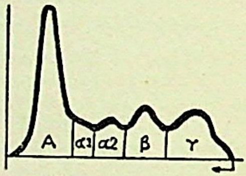
Methods of migration over an intermediary (zonal electrophoresis, microelectrophoresis, electrophoresis on paper).

These methods, instead of examining what occurs at the frontier separating the water from the proteins, investigate the behaviour of a small quantity (drops) of proteins

which migrate either into a column of starch or into an agar agar plate, or more often, into an impregnated paper, the extremities of which are dipped into two electrode vessels containing a buffer solution of a known pH.

Under the influence of the current, the drop displaces and splits itself, and the different proteinic fractions attain a position of equilibrium characteristic of their migration rate. Their demonstration by a colouring reagent gives the eletrophoregram which may be:

- either used as it is
- or, cut up and treated with an eluant which permits an assay of the prepared substances
- or, translated graphically and numerically through a photometer. A curve is thus obtained, having the following general aspect in relation to the proteins:



proteinogram

(the percentage of each fraction may be established by planimetry of the surfaces thus delimited).

b The different proteinic, electrophoretic fractions

The electrophoresis permits to distinguish in the group of serum proteins four principal fractions, each one of which comprises a certain number of sub-fractions, rapid, slow or ultra slow:

1. **The albumins or fraction A** (molecular weight about 80,000)

   Of hepatic origin, they constitute by themselves more than half of the serum proteins. Their diminution is an alarming indication; it may arise from:

- a deficient synthesis due to absence of proteinic supply
- a deficient synthesis due to impairment of the elaborating cells (hepatic affection)
- an excessive consumption, surpassing the possibilities of production (evolutive cancer).
- a loss due to escape of albumin outside the organism (hemorrhages, renal affections, escapes into the effusions)

2. **The α-globulins** (molecular weight: about 120,000) with

the fraction ∝-1 (it is the smallest of all the fractions). It increases in necrotic processes;

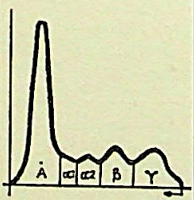
the fraction ∝-2. Devoid of specificity, it increases in all the inflammatory processes and varies almost parallel to the sedimentation rate;

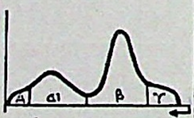
3 **The β-globulins** (molecular weight: about 140,000) with the fractions β-1 and β-2. Their increase is always a disturbing symptom; it occurs every time there is a lipoid retention for any reason whatever (hepatic, renal, arterial or even alimentary).

4 **the γ-globulins** (molecular weight: about 300,000) They form a heterogeneous group consisting chiefly of antibodies. They arise from the reticulo-endothelial system. Any reaction of this tissue could, therefore, give rise to their increase. They are at times entirely absent but this is extremely rare and no explanation has been found for it so far.

: Applications

Normal values and physiological variations of the electrophoretic constants

	General aspect of the electrophoregrams	Fractions	Normal average values in per cent	Physiological variations	
				+	—
		Albumin	58.6 ± 3		in women during pregnancy, slightly up to 70 years in both sexes, more rapidly thereafter
		∝ 1	5.4 ± 0.9	in the course of pregnancy (about 60%)	in women after 60 years
Proteins		∝ 2	7.5±11.5	in the course of pregnancy	almost absent in infants; in women after 6 years
	Proteinogram	β	12.5±1.6	in the course of pregnancy; slightly between 40 and 70 years	almost absent in infants
		γ	16±2.8	in women; slightly after 70 years in both sexes	disappears in infants towards the sixth month; reappears in growing children.

	General aspect of the electrophoregrams	Fractions	Normal average values in per cent	Physiological variations +	Physiological variations −
Gluco-proteins	 Glucoproteinogram	A	0 to 5		
		α 1	5 to 20		
		α 2	20 to 35		beyond 40 years (by 15 to 20%)
		β	20 to 35	after 40 years (15 to 20%)	
		γ	20 to 30		
Lipo-proteins	 Lipo-proteinogram	A	25 to 30		
		α 1		in women up to 50 years	
		β	40 to 60	slightly in the course of digestion (for about 5 hours)	
		γ	20 to 40	slightly in males, in old age, considerably in the 4 hours following meals (may reach 30% according to the richness of the food in lipids), the return to normalcy requiring at least 7 hours	

Some pathological variations of the electrophoretic constants

	A	α1	α2	β	γ
hepatic affections:					spread over
cirrhosis	↓↓	—	—	—	↑↑↑
retention jaundice	—	—	var. ↑	↑	var. ↑↓
infective hepatitis	—	—	↑	—	↑↑
renal affections:					
lipoid nephrosis	↓↓	—	↑↑	↑↑	↓
glomerulo-nephritis	↓↓	—	—	—	↑
amyloidosis	↓↓	↑	var. ↑	—	↑
cardiovascular affections:					
infarct	—	—	↑↑	↑	↑
infective cardiopathy	—	—	↑	—	↑ or ↑↑
mitral cardiopathy	—	—	↑	↑	—
atherosclerosis	—	—	↑	↑↑	↑ or normal
Hematological affections:					
multiple myelomas { either	—	—	—	↑↑↑	—
multiple myelomas { or	—	—	—	—	↓↓↓
leukemia	—	—	—	—	↑
Hodgkin's disease	—	—	↑↑	—	↑
severe anemia	↓↓	—	↑	—	↑
Thyroid insufficiencies:					
(myxedemas)	—	—	—	↑↑	↑
Infectious diseases:					
in general { acute	—	—	↑↑	—	—
in general { chronic	—	—	↑	—	↑ or ↑↑
rheumatic fever	—	↓	↑ or ↑↑	—	↑ rarely
parasitosis	↓ slightly	—	—	—	↑↑

↑ Rise

↓ Fall

3 Lipids

1 *Total lipids:*

7 ± 2 gm. ‰

This assay is very important in lipoid nephrosis and in hyperlipoidemia with lactescent serum, diseases where the increase in lipids may go as far as 20 gm. ‰.

2 *Total cholesterol*

1.80 to 2.80 gm. ‰

Like blood urea, the blood cholesterol levels may lend themselves to various interpretations. The value of a hypercholesterolemia exceeding 3 gm. ‰ in the detection of an atheromatous disease, has not yet been fully established.

3 *Ratio:*

$$\frac{\text{esterified cholesterol}}{\text{total cholesterol}} : \frac{E}{T} = \frac{2}{3} = \boxed{0.60 \text{ to } 0.70}$$

It drops in hepatitis.

4 Carbohydrates

Glycemia (fasting):

0.80 to 1.10 gm. ‰

The accidents of Hypoglycemia supervene only below 0.6 gm. ‰. Glycosuria appears starting from 1.80 gm. ‰

5 Diastases

Blood amylase:

70 to 120 units (Somogyi)

A rise in the blood amylase levels is observed in acute and at times chronic pancreatitis as well as in mumps.

Phosphatases:

(See Hepatic Investigation).

Transaminases:

(See Hepatic Investigation).

Hematological Constants

I Blood Cell Constants

1 R. B. C.

a Number

In the male :	4.5 to 5 million per mm3
In the female :	4.2 to 4.8 million per mm3

b Hemoglobin

In the male :	13.5 to 16 gm. per 100 ml.
In the female :	12 to 15 gm. per 100 ml.

or:

Average concentration of R.B.C. in hemoglobin: 33 to 35% (in % of blood cell volume measured by the hematocrit).

c Color Index (C.I.) normal : 1

A constant, serving as a guiding factor in the diagnosis of anemias.

C.I. = 1 : normochromic anemia
cancer, leukemia
hemorrhage

C.I. > 1 : hyperchromic anemia
anemia of Biermer type
parasitic, nutritional or macrocytic anemia (sprue)

C.I. < 1 : iron deficiency hypochromic anemia
chlorosis, pregnancy
hemoglobinopathy.

d Globular resistance (index of the resistance of the blood cells to a hypotonic solution of NaCl).

Onset of hemolysis : concentration of 4 to 4.5 mg. of NaCl

Total hemolysis : concentration of 3 to 3.30 gm. of NaCl

The blood cell resistance is diminished in congenital hemolytic jaundice, polycythemia vera, Cooley's anemia.

e Hematocrit (volume occupied by the R.B.C.)

Infants (six months) 35%
Children (around 10 years) 41 ± 4.5%

In the female	42 ± 3.5%
In the male	46 ± 2%

f Reticulocytes (% of R.B.C.)

In the female	.9 ± 3%
In the male	6 ± 2%

2 *W. B. C. (Leucocytes):*

- Number: **5,000 to 8,000/mm³ (adults)**

  (Much higher count in children between 0 to 10 years: 20,000 to 10,000/mm³)

- Percentage:

Neutrophils	60 to 70%
Eosinophils	1 to 3%
Basophils	0 to 1%
Lymphocytes	20 to 30%
Monocytes	2 to 8%

3 *Platelets (Thrombocytes):*

Average: **300,000/mm³**

In fact, very variable; counts ranging between 200,000 to 350,000 may be considered as normal.

4 *Sedimentation Rate: (Westergren's technique)*

Normal:

1st hour :	7 to 10 mm.
2nd hour :	8 to 15 mm.
24th hour :	50 to 70 mm.

2 Hemostatic Constants

Bleeding time:

2½ minutes to 4 minutes

(It indicates the capillary and the platelet time of coagulation).

Clotting time:

10 minutes on an average

Normal variations: 7 to 14 minutes

(It indicates the plasmatic factors of coagulation including those of hemophilia)

It is not always established correctly; in case of doubt it should be checked by the following tests:

Howell's Time (plasma):

(The plasma is decalcified with Calcium oxalate and then recalcified with Ca Cl_2)

3 minutes ± 30 secs.

Prothrombin Time (Quick's time)

between 10 to 13 secs.

or in % of normal: 100%
It becomes pathological only starting from a value of around 60 to 70%

Thrombroelastogram

Thromboelastography is an investigation method of the blood coagulability permitting to denote by a single value or by a single graph, all the phenomena that intervene in the course of coagulation; as such it may be considered as the method of choice for the precise control of coagulant and anti-coagulant treatments or for the early detection of risks of hemorrhage or relapses of thrombosis.

Technique

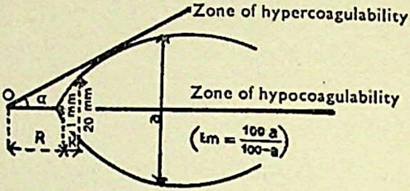
The material required consists of:

- a stainless steel cylindrical vessel containing the recalcified citrated plasma equipped with a horizontal periodic rotary movement;
- a cylinder suspended in this vessel by a twisting thread carrying a mirror which reflects a ray of light over a photographic film, rolling slowly.

The following phenomena are recorded:

- at an initial stage, the plasma being liquid, no effect is produced; the luminous spot remains motionless and draws a straight line (R) which denotes the time required for the onset of coagulation;
- at the second stage, as soon as the fibrin clot develops, the cylinder is drawn along more and more vigorously and the luminous spot registers wider and wider oscillations; by joining the points of maximal amplitude of the oscillations, a double-branched curve (in the shape of a tuning fork) which moves away more or less rapidly according to the elasticity of

the clot, is obtained; it is the thromboelastographic curve which denotes the rapidity of the clot formation (K) and the maximum value of its elasticity (a or Em).



Results

They are expressed:

- either in a graphic form, by the very expressive tracing of the curve shown above;
- or by figures

  direct expression

  of R, K, Em $\left(\frac{100\ a}{100-a}\right)$

  usually, R = 18 mm; K = 7 mm; Em = 130

  A single index of coagulability or Duraffourd Index depending upon the alpha angle made by the tangent to the curve brought to its point of origin with the axis of this curve;

  a normal curve has an **index of 100,** ; the values below or above this figure denote respectively hypo-coagulability or hyper-coagulability.

Hepatic Investigation

The liver possesses a very large number of metabolic functions and the ideal thing would be to explore all of them in order to have as complete data as possible. This is however not feasible in medical practice and the biological exploration should therefore be guided by the clinical picture.

I In the Presence of Jaundice

a *Positive Diagnosis*

Bilirubinemia (Cholemia)
(Hymans Van den Bergh's method)

Direct (conjugated by the liver)

Normal: | **5 to 15** mg. ‰ |

Subicterus: starting from 50 mg. ‰
Frank icterus: above 80 mg. ‰
Indirect (free, of hemolytic origin)

Normal: up to | **10** mg ‰ |

does not exceed this concentration in hepatic jaundice.

b *Etiological Diagnosis*

I Jaundice due to hepatitis (viral)

a Flocculation tests (proteinic function)
They are all largely positive

Hanger (cephaline cholesterol)
+ + + to + + + +

| (Normal: **0** to +) |

Thymol (Mac Lagan's test)
30 to 100 Vernes units

| (Normal up to 10 Vernes units) |

Gros test (Hayem's liquid)
1 ml. to 1.5 ml.

| (Normal: 1.8 to 2 ml). |

Kunkel

Phenol (β and γ-globulins)

| Normal up to **40** Vernes units |

Zinc sulphate (γ globulins)

Normal up to 20 Vernes units

All these tests are hardly specific and denote only the disturbance in the albumin/globulin ratio and in the globulinic fractions inter se. When this type of icterus is suspected, it is better to institute enzymatic tests of hepatic cytolysis.

b Hepatic cytolysis tests

Transaminases

Pyruvic glutamic

average: 1,500 units/ml. (1,000 to 3,000 units/ml.)

(Normal: **25** $\pm$ **19** units)

Glutamic-oxalo-acetic

average: 1,500 units/ml.

(Normal: **40** units/ml. $\pm$ **15** units/ml.)

Serum Iron

above 200 γ per 100 ml.

(Normal: **100** to **140** γ/**100** ml.)

Alkaline Phosphatases

they do not show any increase.

(Normal: 4 Bodansky units)

c Lipoidic function

represented particularly by the blood cholesterol estimation.

Total cholesterol

around normal: (**1.80** gm. to **2.50** gm.)

a value of about 1 gm ‰ is of a very severe prognosis (severe jaundice).

$$\textbf{Ratio} \ \frac{\text{esterified cholesterol}}{\text{total cholesterol}}$$

(Normal: $\frac{2}{3}$ i.e. **0.60** to **0.70**)

It drops in hepatitis by diminution of the esterification.

d Hemostatic Function

Prothrombin

reduced to between 40 and 60%; it does not increase after administration of Vitamin K (Koller's test).

Fibrinogen

reduced to between 1 to 4 gm. ‰

(Normal: 4 to 5 gm. ‰)

e **Hepatic Clearance**

Bromsulphalein test

cannot be employed in jaundice

Induced galactosuria (see cirrhosis)

Considerable increase, in relation to the normal, of the galactose excreted in the first two samples (20 to 70 gm ‰ in the first sample).

A special clinical form

Cholestatic hepatitis

- Biological picture of cholestasis
- With a more or less considerable increase in transaminases in addition.

2 Retention Jaundice

The liver function tests remain more or less normal so long as there is no hepatic cellular impairment, i.e. 3 to 4 weeks after the onset of the jaundice.

After this period, the biological picture may be identical to that of infective hepatitis on account of the lesions caused by intra-hepatic cholestasis.

a **The flocculation tests**

are hardly modified to the extent that an infection does not bring about an increase in serum globulins.

b **The tests of hepatic cytolysis**

the transaminases and the serum iron are normal.

c **Two elements characterise the cholestasis:**

The alkaline phosphatases
increased above 10 units

(Normal: 4 units)

Total cholesterol

exceeds 3 gm. ‰

d **Hemostatic function**

Prothrombin

diminished but it rises with the injection of Vitamin K

e **Hepatic clearance**

induced galactosuria: normal.

2 In the Presence of Hepatic Insufficiency

It is the diagnosis of cirrhosis or of pre-cirrhosis that dominates this chapter, whether alcoholic, post-icteric or cholestatic.

1 Flocculation Tests

They are very unreliable because they may be sub-normal.

Kunkel's test with zinc sulphate

Increased above 20 Vernes units when there is disturbance of the albumin/globulin ratio.

Proteinemia

Total: It is often normal or even increased in cirrhosis on account of the rise in globulins.

On the other hand the serum albumin is diminished, whence the interest of the albumin/globulin ratio:

$$\frac{A}{G} = \frac{45 \text{ gm. ‰}}{30 \text{ gm. ‰}} = 1.5$$

Reduced to 1 or even reversed in cirrhosis.

2 Tests of Cytolysis

Transaminases

Alcoholic cirrhosis: more or less normal
Post-hepatic cirrhosis: uniform increase.

Alkaline phosphatases

Normal (unless it is a cholestatic cirrhosis).

3 Lipoid function

Cholesterol

It drops to less than 1.50 gm. ‰ when the hepatic function is disturbed.

$$\text{Ratio } \frac{\text{Esterified cholesterol}}{\text{total cholesterol}}$$

$\frac{E}{T}$ reduced (normal: 0.60)

4 Hemostatic function

Prothrombin

reduced to between 30 and 60%.
It hardly rises with Vitamin K.

5 Hepatic clearance

Bromsulphalein test

is very useful here.

After intravenous injection of bromsulphalein, the quantity persisting in the blood is evaluated 15 and 45 minutes after the injection.

Normal:

after **15** minutes	25%
after **45** minutes	5%

Higher percentages denote a hepatic insufficiency.

Induced galactosuria

Its interest is equally unquestionable in this sphere because it explores not only the carbohydrate function but also the function of fluid clearance (delayed excretion of water).

After ingestion of 40 gm. of galactose dissolved in 200 ml. of water, the patient distributes his 24-hour urine into four samples (8 to 10 a.m., 10 to 12 noon, 12 to 6 p.m., 6 p.m. to 8 a.m.)

Results

	1st sample	2nd sample	3rd sample	4th sample
Normal	5 gm. ‰	0 or traces	0	0
Cirrhosis	8 to 15 gm. ‰	6 to 8 gm. ‰	4 to 5 gm. ‰	0 to 2 gm. ‰
Acute Hepatitis	30 to 70 gm. ‰	10 to 20 gm. ‰	0	0

Endocrine Investigation

I The Pituitary

Most of the methods of pituitary investigation are indirect.

1 *Somatotrophic Hormone*

Its estimation, effected through an immunological method, can be carried out only in a few research laboratories.

Its secretion can, therefore, be assessed only indirectly, by investigating the metabolisms concerned: that of calcium and of phosphorus in particular, and carbohydrate metabolism as well.

a Acromegaly

α) in the blood

- phosphorus: 45 to 55 mg ‰

  (normal: **30** to **40** mg ‰)

- calcium: 110 mg ‰, at times more

  (normal: **95** to **105** mg ‰)

- hyperglycemia

β) in the urine

- hypercalciuria > 300 mg./24 hours
- glycosuria.

b Dwarfism

The preceding indirect methods are hardly reliable to establish a diagnosis of pituitary dwarfism.

2 *Gonadotrophins*

They are estimated by various biological methods, the most common among which employs the mouse so that results are evaluated in mouse units (M.U.)

The ideal thing would be to estimate the two principal stimulins: the Follicle Stimulating Hormone (F.S.H.) and the Luteotrophic Hormone (L.H.) The present methods do not permit their separation and the gonadotrophins are estimated as a whole.

When an estimation of Follicle Stimulating Hormone or F.S.H. is called for, the estimation holds good equally in the male as well as in the female, the hormone being the same.

Results

Normal : 5 to 25 M.U./24 h.

It **increases** above 25 M.U. when the gonadal function is absent or reduced.

It **diminishes** below 5 M.U. in pituitary insufficiency.

3 *Corticotrophin (A.C.T.H.)*

A direct estimation of blood A.C.T.H. is not a practical proposition at present. Only certain research laboratories employ Sayer's test based on the diminution of ascorbic acid and cholesterol which corticotrophin induces at the level of the adrenal gland.

The biological exploration of this sector, therefore, still requires recourse to indirect methods; in this case they are the static adrenal investigations coupled with the dynamic tests:

Hormonal Assays

- **Static**

Hypopituitarism

17-ketosteroids: < 3 mg/24 h. (In the female)
< 6 mg/24 h. (In the male)
17-hydroxycorticoids: < 2 mg/24 h.

Hyperpituitarism

It is easily confused with the Cushing's syndrome.

- **Dynamic**

a Thorn's test with A.C.T.H. (25 mg. I.V.)

A clear adrenal response is obtained in case of adrenal insufficiency secondary to hypopituitarism; it is nil, on the contrary, if the adrenal insufficiency is primary, of the type of Addison's disease.

There is a cause of error, however: when the hypopituitarism is long-standing, the atrophied adrenal gland requires to be stimulated preliminarily with daily intramuscular injections of A.C.T.H. for some 10 days prior to Thorn's test.

Hypertrophied adrenal response in case of Cushing's syndrome. (Refer to the 'Adrenal Gland' for the details).

b Metopyrone Test

It is a recent test effected with a substance, metopyrone, which blocks at a certain stage the synthesis of Hydrocortisone by the adrenal gland. This disappearance of Hydrocortisone brings about a reactional hypersecretion of A.C.T.H., provided the pituitary is functioning. This hypersecretion of

A.C.T.H. induces in its turn an acceleration of the adrenal synthesis which leads to the excretion of corticoid metabolites which are, however, estimated with the same reaction as Hydrocortisone (Porter and Silber).

Consequently, when the pituitary is unaffected the urinary 17-hydroxycorticoids increase to 200 to 300% of the basic count. If the pituitary is insufficient, the increase is small or nil.

4 *Thyrotrophic hormone*

There is no direct estimation of the thyrotrophic hormone in common practice. Aron's test which consists of observing the effects of the injection of urine to be tested on the thyroid of a guinea-pig, comes within the purview of the laboratory.

It is quite difficult to isolate in fact the thyrotrophic hormone from its thyroid receptor. In practice, its investigation is therefore limited to the institution of dynamic tests of the thyroid function (see 'Thyroid').

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2 The Adrenal Glands

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a *Hormonal assays*

Three varieties of hormones are secreted by the adrenocortical gland:

the gluco-corticoids,
the androgens and the other sex hormones,
aldosterone.

a The estimation of their urinary metabolites

is availed of to assess the functional capacity of the gland.

1 The gluco-corticoids

are estimated with the help of the Porter & Silber's reaction to phenylhydrazine. They are called 17-hydroxycorticoids, or 17-OHCS.

Normal: 24-hour urine.

In the male	: **6 ± 2** mg/24 h.
In the female	: **5 ± 1.5** mg/24 h.
blood	: **5 to 15** γ/**100** ml.

Variant :

the 17-ketogenic steroids or 17-K.G.S.
(employed particularly in England)
In the male : 8 to 25 mg/24 h.
In the female : 5 to 18 mg/24 h.

2 The Androgens

are evaluated by the estimation of 17-ketosteroids which comprise numerous metabolites, arising on the one hand from the adrenal gland (to the extent of 2/3), and on the other hand from the gonads (1/3, particularly in the male).

Urine : Normal :

In the male	:	**13 ± 4 mg/24 h.**
In the female	:	**8 ± 3 mg/24 h.**

Blood : Normal :

In the male	:	**94 ± 49 γ/100 ml.**
In the female	:	**79 ± 31 γ/100 ml.**

Dehydro-isoandrosterone (DHA)
specific androgen of the adreno-cortical glands

Normal :

In the male	:	**2 ± 0.5 mg/24 h.**
In the female	:	**1.5 ± 0.5 mg/24 h.**

Or, 10 to 16% of the 17-ketosteroid count.

The increase in this secretion of DHA is a good argument to incriminate the adrenal gland in a syndrome of virilism.

3 Pregnanetriol

A metabolite of 17-hydroxyprogesterone, the rise of which is particularly marked in congenital hyperplasia of the adrenal glands.

This estimation is therefore employed in the etiological diagnosis of virilism.

Normal : **0.5 to 1 mg/24 h.**

The increase becomes significant starting from 1 mg/24 h.

4 Estrogens

The adrenal gland also produces estrogens (estriol and estrone). Their estimation is particularly useful in males in case of a feminising tumour of the adrenal gland.

Normal : Folliculin : **5 to 20 γ/24 h.**

5 Aldosterone

Its estimation is quite complex; it can be effected only in specialised laboratories.

With normal sodium diet:

Normal : **5 ± 1.5 γ/24 h.**

b Investigation of the secretion

All these tests estimate only the metabolites of the adrenal hormones excreted in the urine. They are,

therefore, only the indirect reflection of the glandular activity.

Thanks to the hormones labelled with radio-active carbon, it is possible to assess the quantities secreted by the gland by employing the method of isotopic dilution.

Cortisol (hydrocortisone)	:	21 to 25 mg/24 h.
Corticosterone	:	2.1 mg/24 h.
Aldosterone	:	72 γ/24 h.

In Cushing's syndrome the secretion of cortisol may go upto 66 mg, 149 mg per 24 hours.

In Conn's syndrome (primary hyperaldosteronism) the secretion of aldosterone reaches 260 to 1000 γ per 24 hours.

c Interpretation

In adrenal insufficiency, the static urinary estimations of the hormones are generally sufficient to ensure the diagnosis. In fact the 17-K.S. and the 17-O.H.C.S. are lowered.

In hypercorticism, whether metabolic (Cushing) or sexual (virilism), these estimations are not always sufficient on account of the considerable fluctuations that may normally arise.

It is particularly in such cases that recourse should be had to dynamic tests.

b . Dynamic Tests

1 Thorn's test with A.C.T.H.

Stimulation test of the adrenal gland with corticotrophin:

either, preferably, with A.C.T.H. by intravenous perfusion at the dose of 25 mg. for one or two days

or, strictly, with A.C.T.H. retard by intramuscular injection at the rate of 2 injections of 40 units at a 12 -hourly interval.

Normal:

17-O.H.C.S.

1st day:

Δ : + 14 mg (5 mg < Δ < 20 mg)

i.e. 2 to 3 times the basic count.

2nd day:

Δ : + 24 mg (15 mg < Δ < 41 mg)

i.e. nearly 5 times the basic count.

17-K.S.

1st day:

Δ: + 4 mg

2nd day:

Δ: + 6 mg

(G. W. Thorn)

It may be remarked that the 17-K.S. represent a bad barometer for the adrenal response.

Pathological:

a In adrenal insufficiency one does not observe practically any increase unless the insufficiency is of pituitary origin. In metabolic hypercorticism (Cushing), the increase of 17-O.H.C.S. should exceed 20 mg., on an average it is of 30 to 35 mg per 24 hours. That of 17-K.S. attains and exceeds 10 mg (average: 15 mg/24 h.).

b In the course of non-tumoral virilisms, whether acquired or congenital (congenital hyperplasia of the adrenals), the excretion of 17-ketosteroids may attain or exceed even the figure of 20 mg/24 h. That of 17-O.H.C.S. is variable and may remain around normal.

c When the hypercorticism is of tumoral nature, whether metabolic or virilising, the adrenal gland remains insensitive to the action of A.C.T.H.

2 Inhibition Test

Its aim consists, with the help of a corticoid active in small doses (generally DEXACORTISYL), in blocking the A.C.T.H. secretion without disturbing the urinary estimations by a very considerable exogenous supply of the steroid hormone.

Normal:

With a dose of 3 mg. of DEXACORTISYL per 24 hours, continued for five days, the excretion of adrenal steroids drops in subjects whose adrenal gland is free from all tumour formation.

17-K.S. :	**0.5** to **2.5** mg/24 h.
17-O.H.C.S. :	**0.5** to **1.5** mg/24 h.

Pathological:

In Cushing's syndrome this dosage of 3 mg. of DEXACORTISYL is not always sufficient to inhibit an excited adrenal. It has been therefore advised (G. W. Liddle) in case this dosage is not sufficient, to increase it to 8 mg. per day for 48 hours. If no inhibition is then observed, the adrenal is probably affected with a tumoral process (adenoma or cancer).

3 The Gonads

a In women (ovary)

1 The hormonal assays

These assays do not always permit to interpret the menstrual disturbances, quite often functional, unless there is a marked luteal insufficiency.

On the other hand, they are very useful in the exploration of an amenorrhea.

a Menstrual cycle

follicular phase:
(first 12 days)

Folliculin	5 to 20 γ/24 h.
Pregnanediol	1 mg/24 h.

luteal phase

Folliculin	20 to 60 γ/24 h.
Pregnanediol	5 to 7 mg./24 h.

b Case of an amenorrhea

Apart from pregnancy, the etiology of amenorrhea may be established through two estimations:

the F.S.H.
the Folliculin.

Ovarian-deficient amenorrhea

F.S.H. > 25 M.U.
Folliculin <10 γ/24 h.

Amenorrhea due to pituitary insufficiency

F.S.H. < 5 M.U.
Folliculin : 10 to 20 γ/24 h.

Hypothalamic amenorrhea (functional)

F.S.H. : 5 to 25 M.U.
Folliculin : 10 to 40 γ/24 h.

2 Dynamic Test (M.F. Jayle)

Particularly useful when it is desired to detect a luteal insufficiency or to determine the ovarian responsibility in the pathogenesis of certain virilisms.

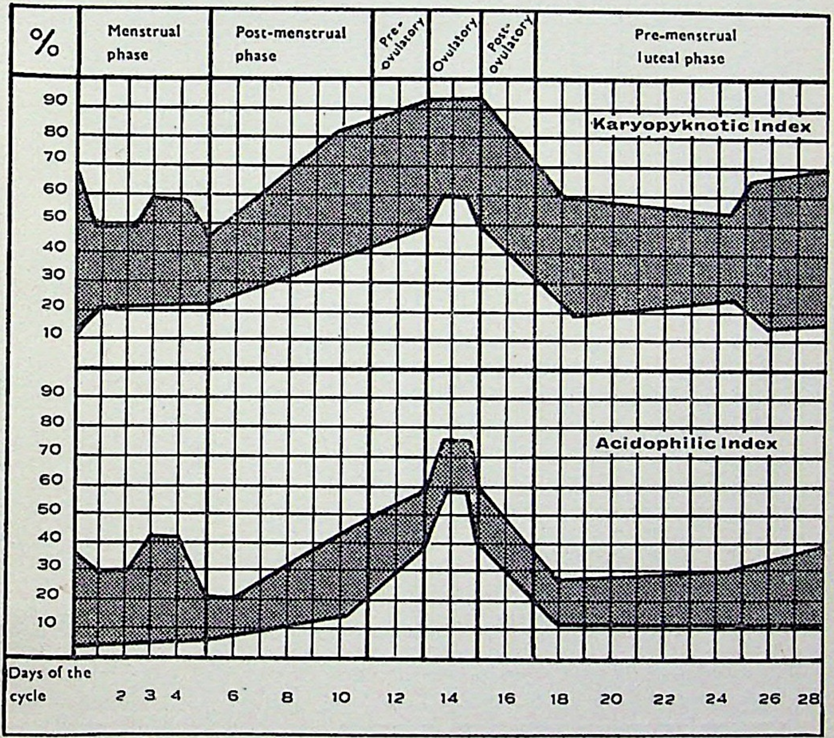
It consists in suppressing primarily the adrenal secretion with the help of DEXACORTISYL (3 mg. per day) for six continuous days, then under cover of this inhibition, in injecting, during the first three days of the inhibition, 10,000 units of chorionic gonadotrophin each day. The urine should be collected one day before the test and on the 6th day of the test.

3 The Vaginal smears

A simple method which is within the scope of all laboratories but which calls for a certain experience in cytological interpretation.

Two elements are particularly taken into consideration:

- the percentage of the eosinophil cells
- the percentage of the cells whose nuclei are under pyknosis (caryopyknotic index).

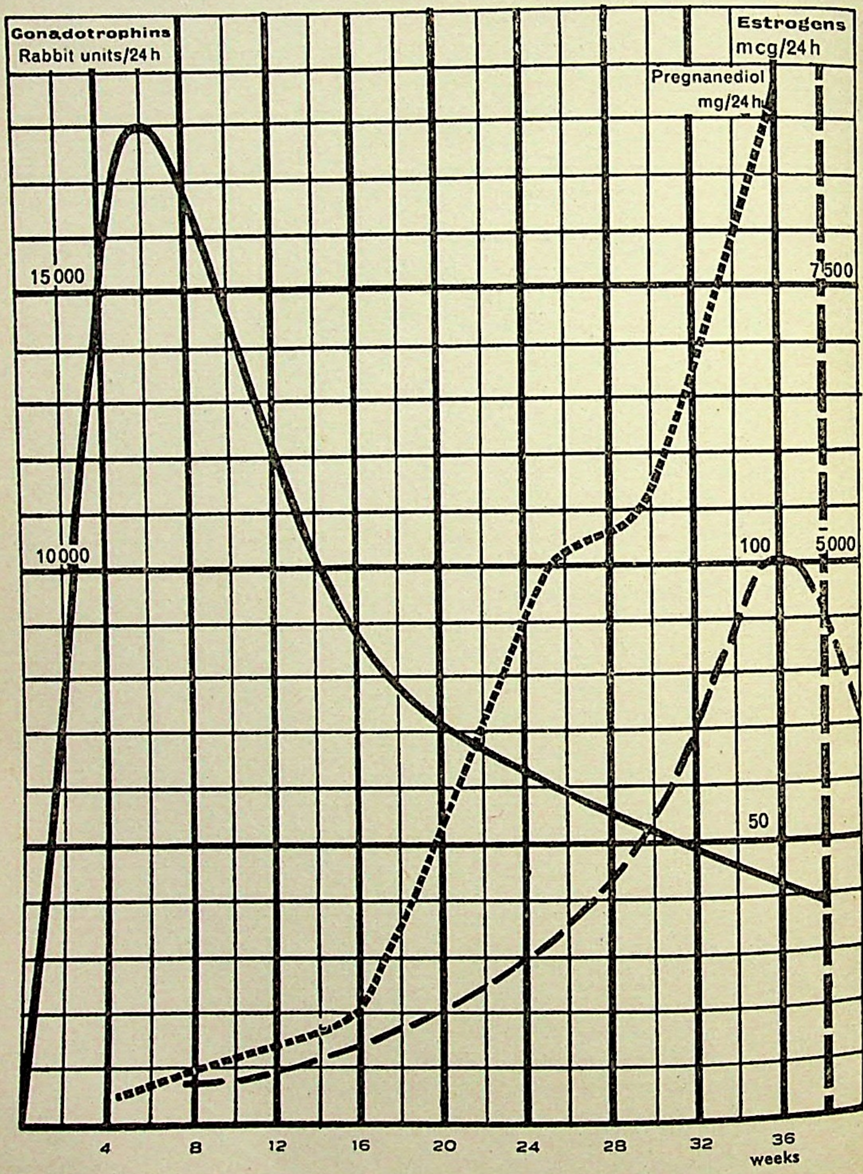


b In Pregnancy

Three hormonal criteria enable currently to follow up the proper development of a pregnancy:

- the estimation of phenol-steroids (folliculin)
- the estimation of pregnanediol (progesterone)
- the estimation of F.S.H. or gonadotrophins.

Hormonal curve during pregnancy



It should be borne in mind, however, that large variations may occur and that the hormonal estimations assume all their significance when there are antecedents of spontaneous abortion and when it is desired to follow-up the results of the hormonal treatment.

The vaginal smears

They represent a simple detection method of threatened abortion.

Normally:

eosinophil index	$< 5\%$
pyknotic index	$< 10\%$

Threatened abortion:

Eosinophil index

$> 30\%$ up to the 4th month
$> 10\%$ starting from the 6th month.

c *In men (testes)*

I Hormonal assays

The hormones, the estimation of which is likely to provide data, are:

the F.S.H. (pituitary)
the 17-ketosteroids
eventually, the D.H.A. (see 'Adrenals')

The hormonal exploration of the testicular function is particularly useful in delayed puberty, infantilism and dwarfism. It permits in fact, to differentiate between the responsibility of the pituitary and of the testicle.

Normal

a F.S.H. $\geqslant$ **5** mouse units $\leqslant$ **25** mouse units
b 17-ketosteroids **13** $\pm$ **4 mg/24 h.**

(out of which 1/3 is of testicular origin).

Children

3 to 6 years	<	0.5	mg./24 h.
6 to 8 ,,	:	0.5	mg. to 1 mg./24 h.
8 to 10 ,,	:	1	mg. to 2 mg./24 h.
11 to 13 ,,	:	2	mg. to 5 mg./24 h.
13 to 17 ,,	>	4	mg./24 h. and above.

c D.H.A. **2** $\pm$ **0.5 mg./24 h.**

Pathological

The etiological diagnosis of a testicular insufficiency is based much more on the pituitary gonadotrophin (F.S.H.) counts than on the 17-ketosteroid count. In fact, either they are reduced, which only confirms the diagnosis, or inspite of definite testicular insufficiency,

the 17-ketosteroids remain around the normal count because the adrenal gland exerts its function (with androgens of mild virilising action). In these cases the estimation of D.H.A. permits at times to detect the vicarious adrenal reaction.

We have thus:

Pituitary etiology

F.S.H. $<$ 5 M.U.
17-K.S. $\leqslant$ normal

Gonadal etiology

F.S.H. $>$ 25 M.U.
17-K.S. $\leqslant$ normal
D.H.A. $\geqslant$ normal (if 17-K.S. normal)

Dynamic Test

In order to differentiate between the responsibility of the testicle and of the pituitary, it is at times necessary to have recourse to this test, recommended by M. F. Jayle, which consists, after having carried out an estimation of 17-ketosteroids and folliculin, in injecting 10,000 units of chorionic gonadotrophin for 3 consecutive days.

When the testicle is functional there is a rise in:

17-ketosteroids : 50 to 100 %
Folliculin : 100 to 300 %

2 Spermogram

Normal

Volume:

2 to 5 ml.

Number:

60 to 100 millions of spermatozoa per ml.

(There is a tendency to admit nowadays that semen containing 40 millions of spermatozoa, is still fertile)

Motility:

2 hours after the emission:
70 % are motile
20 % (abnormal or immature)
4 h. after 60 %
8 h. after 40 %

Pathological

Azoospermia is characterised by a total absence of spermatozoa.

Oligospermia is characterised by a count of spermatozoa below 40 million per ml.

It is frequently accompanied by a diminution in the motility of the spermatozoa, i.e. oligo-asthenospermia.

3 Nuclear chromatin

The nuclei of the epithelia removed from a female individual possess a very characteristic corpuscle (positive chromatin). This corpuscle corresponds to two reproduction chromosomes XX, characteristic of the female sex.

The nuclei of an individual of the male sex are optically empty (negative chromatin).

In Turner's syndrome (gonadal agenesia) the nuclei are of the male type, corresponding to a chromosomic formula X O.

In Klinefelter's syndrome, the nuclei are of the female type, the formula being X X Y.

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4 The Thyroid

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a Usual tests

1 Basal metabolism

It should always be interpreted very strictly and has no value except when it is carried out under sedation obtained, for instance, with a barbiturate.

Hyperthyroidism : 25 to 35 % and above
Hypothyroidism : — 10 to — 25 %

2 Total cholesterol

Hyperthyroidism : < 2 gm ‰
Hypothyroidism : > 3 gm ‰

3 I-131 Uptake

Test permitting to evaluate the affinity of the thyroid for iodine and as such to determine its activity. The estimation of the iodine uptake by the thyroid usually takes place at the 6th and at the 24th hour of the absorption of a tracer dose of radio-active iodine.

euthyroidism

6th hour 20 to 40 %
24th hour 35 to 55 %

hyperthyroidism

6th hour 40 to 60 %
24th hour 40 to 80 %

hypothyroidism

6th hour	0 to 10 %
24th hour	0 to 15 %

These counts have only suggestive and not absolute value. The aspect of the fixation curve is equally of great importance; it is thus that in hyperthyroidism, the 24th-hour count is often inferior to that of the 6th-hour on account of the very rapid excretion of the thyroxin by the Basedow type thyroid. This fact permits to set aside from the sphere of hyperthyroidism certain simple goitres, in which the uptake at the 6th hour is very high but which at the 24th hour retains the same value.

4 Achilles Reflexogram

The duration of muscular decontraction, once the reflex movement is obtained, depends upon the thyroid condition of the subject. This phenomenon is particularly marked at the level of the Achilles reflex (De Gennes & coll.).

A special apparatus permits to estimate the duration of this decontraction:

normal	20 to 30 hundredths of a second
hyperthyroidism	$<$ 20 hundredths of a second
hypothyroidism	$>$ 30 hundredths of a second

b *Exceptional tests*

They can be effected only by highly specialised laboratories.

1 Protein-bound Iodine (P.B.I.)

It represents the estimation of the circulating organic iodine.

normal	4 to 8 γ/100 ml.
hyperthyroidism	10 γ %
hypothyroidism	4 γ %

2 Butanol extractable Iodine (B.E.I.)

It represents the real hormonal iodine. This estimation has its value in the diagnosis of certain goitres due to disturbance of hormonogenesis.

normal : represents about 80 % of P.B.I.

3 Fixation of triiodothyronine (T3 I-131) by the R.B.C.

This test assumes its value when for various reasons (absorption of iodine compounds, for example), the estimation of the fixation of iodine-131 by the thyroid

cannot be effected. This test is carried out in vitro on foreign blood cells.

normal : 10 to 17 % of fixation
it rises in hyperthyroidism
it drops in hypothyroidism and pregnancy.

c *Dynamic test*

Werner's inhibition test

Certain para-Basedow-type syndromes, the I-131 fixation curve of which is above the normal, are of difficult interpretation. The triiodothyronine test is then employed. It permits to denote the resistance to the inhibition of pituitary thyrotrophic hormone characteristic of Basedow's disease.

After an initial estimation of the fixation of I-131, the patient is made to absorb 200 γ per day of DL-triiodothyronine; then a new test of iodine fixation is again carried out.

normal : diminution of more than 25% of fixation;
hyperthyroidism: the rate of uptake of iodine remains unchanged.

Renal Investigation

Urine Analysis

I Chemical Analysis

It is established that the isolated investigation of the principal chemical elements excreted in the urine has no practical value since the concentrations found should be compared with the plasmatic concentrations of these same elements.

The notion of clearance dominates in fact the renal physiology. It does not represent anything other than the renal capacity to clear a given volume of blood ef a certain substance.

Some of the figures mentioned here are therefore only for a mental idea.

a diuresis

1 litre to 1,800 ml./24 h.

physiological variations:
between 500 to 2,000 ml./24 h.

b pH

6 on an average

Variations of 4.8 to 7.5

c Albuminnria

A routine investigation of the greatest importance in renal symptomatology.

Any precipitate by acetic acid which does not disappear upon boiling should lead to an estimation of albuminuria.

With the Esbach tube method, hardly accurate, an albuminuria below 0.50 gm. is of delicate interpretation because it may be connected, not with a glomerulonephritis but with a leucocyturia or hematuria.

d Urinary urea

Quite variable, its concentration depends upon diuresis and diet, so that when the diuresis is normal, only a concentration below 10 gm. assumes a significance.

Standard value **10 to 30 gm./24 h.**

e Uric Acid

| 0.10 to 0.25 gm./24 h. |

It also varies according to the diet.

f Chlorine

Its static estimation does not provide any useful information; the physiological causes of variations are so significant. As a pointer:

chloruria (in Cl ion): 3 to 10 gm/24 h.

The graded chloride excretion test (Pasteur Vallery-Radot) permits on the other hand to investigate the renal functional dynamics in relation to electrolytes: the patient is submitted to a chloride-free diet until the quantity of chlorine eliminated per 24 hours remains fixed. 10 gm. of sodium chloride per 24 hours are then added to the diet. The number of days required for the urinary excretion of the chlorides to be equal to the absorption is then estimated.

In case of edematous nephritis the kidney takes more than 4 days to excrete the ingested quantity or in the more severe cases, the renal excretion may not even attain this level of 10 gm./24 h.

g Sodium

Only its drop below 1 gm./24 h. under a normal sodium diet assumes a pathological significance (nephritis, cirrhosis, cardiac affections).

h Creatine-Creatinine

It is variable according to individuals, but remains relatively stable in the same subject except in cases of renal impairment or in the rare case of a myopathy.

Taken together with creatinemia it may constitute a useful means of determining renal clearance.

total creatinine: | 1.5 to 2.5 gm./24 h. |

i Calcium

| 100 to 250 mg./24 h. |

The excretion of calcium in the urine is necessarily variable according to the diet (milk products increase it considerably). Apart from this, a concentration exceeding 250 mg./24 h. generally denotes a calcium metabolic disturbance.

2 *Microscopic Examination*

An indispensable stage in renal exploration, the microscopic examination of the urinary residue cannot be summed up in the form of constants. One may only point out the interest of the investigation:

Of casts

The granular casts (tubular desquamation) being considered as having a definite pathological value.

Of bacteriuria

Blood cell count

(estimated on a diuresis of 3 hours: J. HAMBURGER)

R.B.C. (per minute) **500 to 1,000**

W.B.C. (per minute) **1,000 to 2,000**

3 *Renal Clearance*

This chapter groups several tests which estimate the basic renal function: its purifying capacity.

a Volhard's concentration test

The subject should not take more than 500 ml. of liquid over 24 hours. The urine is collected approximately every three hours.

Normally:

- the diuresis attains 300 to 700 ml. in 24 hours.
- the **specific gravity exceeds 1.025 in one of the samples,** normally attaining 1.030 to 1.035.

b Induced diuresis test (Cottet)

Absorption of 600 ml. of water in the morning on an empty stomach.

Normally:

- the maximum polyuria takes place one to two hours at the most after the fluid absorption.
- the quantity absorbed is excreted within 4 hours.
- the urinary specific gravity drops below 1.005 in one of the samples.

c Phenol-Sulphonephthalein Test (P.S.P. Test)

The intravenous injection of 1 ml. of P.S.P. solution (i.e. 6 mg.). The subject drinks a glass of water and the urine is tested 15 to 70 minutes after the injection.

Normally:

in 15 minutes,

minimal excretion of **20%** of the injected dose

in 70 minutes,

minimal excretion of **55%**

d Urea clearance

Ambard's constant

normal: $\mathbf{0.065 < K < 0.085.}$

The constant increases in case of renal insufficiency. This test is significant only if the blood urea count does not exceed 0.5 gm ‰ and if there is no disturbance of the urinary output.

There is a tendency to adopt nowadays the following test instead:

Van Slyke's Coefficient

It estimates the quality of the clearance by the kidney of the urea content in a certain quantity of blood.

The coefficient is therefore the result of the ratio between the urinary output of the urea and the quantity which is contained in the blood.

P : concentration of blood urea in mg. per 100 ml.
V : urinary volume in ml. per minute.
U : urinary urea concentration in mg. per 100 ml.

Thus: $$C = \frac{U \times V}{P}$$

Maximal clearance (mC)

corresponding to the urinary output of at least 2 ml. per minute

$$mC = \frac{UV}{P} = 75 \text{ ml. per minute}$$

This means that the kidney has cleared 75 ml. of blood in one minute. The result is generally expressed in percentage of the normal value.

Results:

normal:	**75% to 130%**
border line figures:	50% to 75%
pathological:	< 50%.

Standard Clearance (sC)

It is employed when the urinary output is below 2 ml. per minute.

$$sC = \frac{U\sqrt{V}}{P} = 54 \text{ ml. per minute.}$$

e Glomerular and Tubular clearance

More precise exploration methods but which rather call for specialised techniques.

Mannitol clearance (glomerular)

normal **100 to 130 ml./minute**

< 100 ml./minute : glomerular deficiency

Para-amino-hippuric acid clearance

(P.A.H.) (tubular clearance)

normal: **500 to 700 ml. per minute**

< 400 ml./minute : tubular deficiency or diminution of the renal plasmatic flow.

Prostate

Acid phosphatases

normal: **1 to 2 units** (King)
1 to 5 units (Plumel)

pathological: 7 units (King)
12 units (Plumel)

The marked increase in the acid phosphatases above these figures is generally the evidence of bone metastasis of cancer of the prostate.

Neurology

The exploration of the nervous system calls for highly specialised techniques with which should be associated both the clinical data as well as those provided by the electrical (electro-encephalogram, gamma-encephalography) or even radiological (gaseous encephalography, cerebral arteriography) tests.

To recall here the characteristics of:

C.S.F.

Albumin

0.15 to 0.20 gm ‰

Pathological, starting from 0.30 gm. ‰

Chlorides

7.3 ± 0.10 gm. ‰. (in NaCl)

Glucose

0.50 ± 0.05 gm. ‰.

Cytology

Normal: between **0 to 2** cells (generally lymphocytes)

pathological > 4 cells.

THERAPEUTIC INDEX

Abortion, habitual	Ethinestryl, Lutonestryl
Abortion, threatened	Ethinestryl, Lutonestryl
Abscess, cold	Sterogyl 15
Acne	Ethinestryl
Addison's disease	Cortisone Roussel Injectable, Hydrocortisone Roussel Intravenous
Adrenocortical insufficiency	Cortisone Roussel Injectable, Hydrocortisone Roussel Intravenous
Adrenogenital syndrome	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Agranulocytosis	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Allergy	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Intravenous, Hydrocortisone Roussel Collyrium, Hydrocortisone Roussel Ophthalmic Ointment, Hydrocortisone Roussel Injectable, Hydrocortisone Roussel Skin Ointment, Prednisolone Roussel Tablets, Prednisolone Roussel Collyrium, Prednisolone Roussel Skin Ointment, Soframisone Collyrium, Sofradex Cream, Sterogyl 15
Amenorrhea	Ethinestryl, Lutonestryl
Anemia, acquired hemolytic	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Angioneurotic edema	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Ankylosing spondylo-arthritis	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injectable, Prednisolone Roussel Tablets
Anorectitis	Proctosedyl
Anthracosis	Cortasmyl

Apophysitis	Hydrocortisone Roussel Injectable
Arthritis, rheumatoid	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injéctable, Prednisolone Roussel Tablets
Asthenia	Geronyl, Sterandryl, Sterandryl Retard, Sterogyl 15
Asthma	Bi-Decortisyl, Cortasmyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Intravenous, Prednisolone Roussel Tablets, Sterogyl 15
Asthmaticus, status	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Intravenous, Prednisolone Roussel Tablets
Bagassosis	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Berylliosis	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Blepharitis	Hydrocortisone Roussel Collyrium, Hydrocortisone Roussel Ophthalmic Ointment, Prednisolone Roussel Collyrium, Soframisone Collyrium, Soframycin Ophthalmic Ointment
Bouchard's nodes	Hydrocortisone Roussel Injectable
Bronchitis, chronic	Bi-Decortisyl, Cortasmyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Brucellosis	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Burns	Sofradex Cream
Burns, ocular	Hydrocortisone Roussel Collyrium, Hydrocortisone Roussel Ophthalmic Ointment, Prednisolone Roussel Collyrium, Soframisone Collyrium
Bursitis	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injectable Prednisolone Roussel Tablets

Cancer of the breast	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets, Sterandryl
Cancer of the prostate	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Ethinestryl, Prednisolone Roussel Tablets
Cardiac failure, congestive	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Cardiopathies, rheumatic	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Cataract, post-operative sequelae of	Hydrocortisone Roussel Collyrium, Hydrocortisone Roussel Ophthalmic Ointment, Hydrocortisone Roussel Injectable, Prednisolone Roussel Collyrium, Soframisone Collyrium
Chalazion	Soframycin Ophthalmic Ointment
Chorea	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Choroiditis	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injectable, Prednisolone Roussel Tablets
Cirrhosis, ascitic	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injectable, Prednisolone Roussel Tablets
Cirrhosis of the liver	Sterandryl, Sterandryl Retard
Climacteric, female	Ethinestryl, Geronyl
Climacteric, male	Geronyl, Sterandryl, Sterandryl Retard
Colitis, ulcerative	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injectable, Prednisolone Roussel Tablets
Coma, hepatic	Hydrocortisone Roussel Intravenous
Conjunctivitis	Hydrocortisone Roussel Collyrium, Hydrocortisone Roussel Ophthalmic Ointment, Hydrocortisone Roussel Injectable, Prednisolone Roussel Collyrium, Soframisone Collyrium, Soframycin Ophthalmic Ointment
Convalescence	Geronyl, Sterogyl 15, Sterogyl Drops

Corneal injuries	Hydrocortisone Roussel Collyrium, Hydrocortisone Roussel Ophthalmic Ointment, Prednisolone Roussel Collyrium, Soframisone Collyrium, Soframycin Ophthalmic Ointment
Corneal ulcer	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Collyrium, Hydrocortisone Roussel Ophthalmic Ointment, Prednisolone Roussel Collyrium, Prednisolone Roussel Tablets, Soframisone Collyrium, Soframycin Ophthalmic Ointment
Corneo-crystalline trauma	Hydrocortisone Roussel Injectable
Cor pulmonale	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Intravenous, Prednisolone Roussel Tablets
Cystitis, interstitial	Hydrocortisone Roussel Injectable
Dacryocystitis	Soframycin Ophthalmic Ointment
Decalcification in pregnant and lactating women	Sterogyl 15, Sterogyl Drops
Dehydration syndromes	Cortisone Roussel Injectable Hydrocortisone Roussel Intravenous
Dentition, delayed	Sterogyl 15
Dermatoses	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injectable, Hydrocortisone Roussel Intravenous, Hydrocortisone Roussel Skin Ointment, Prednisolone Roussel Skin Ointment, Prednisolone Roussel Tablets, Sofradex Cream
Dermatomyositis	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Dupuytren's contracture	Hydrocortisone Roussel Injectable
Dysmenorrhea	Ethinestryl, Sterandryl Retard

Eczemas	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injectable, Hydrocortisone Roussel Skin Ointment, Prednisolone Roussel Skin Ointment, Prednisolone Roussel Tablets, Sofradex Cream, Sterogyl 15
Emphysema	Bi-Decortisyl, Cortasmyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Encephalitis	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Intravenous, Prednisolone Roussel Tablets
Endocarditis	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Endometriosis	Sterandryl Retard
Epicondylitis	Hydrocortisone Roussel Injectable
Episcleritis	Hydrocortisone Roussel Collyrium, Hydrocortisone Roussel Injectable, Hydrocortisone Roussel Ophthalmic Ointment, Prednisolone Roussel Collyrium, Soframisone collyrium, Soframycin Ophthalmic Ointment
Erysipelas	Soframycin Ophthalmic Ointment
Fibroids, uterine	Sterandryl Retard
Fibrosis, pulmonary	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Fibrositis	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Fissures, anal	Proctosedyl
Fistulae	Sterogyl 15
Folliculitis	Soframycin Ophthalmic Ointment
Fractures, delayed consolidation of	Sterogyl 15, Sterogyl Drops
Frigidity, female	Sterandryl Retard
Gastritis, allergic	Hydrocortisone Roussel Injectable
Geriatrics	Geronyl
Gingivitis	Hydrocortisone Roussel Injectable

Glaucoma (post-operatively)	Hydrocortisone Roussel Collyrium, Hydrocortisone Roussel Ophthalmic Ointment, Prednisolone Roussel Collyrium, Soframisone Collyrium
Gout, acute	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Heberden's nodes	Hydrocortisone Roussel Injectable
Hemolytic disease of the new born	Cortisone Roussel Injectable, Hydrocortisone Roussel Intravenous
Hemorrhoids	Proctosedyl
Hepatitis, viral	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Herpes	Hydrocortisone Roussel Skin Ointment, Prednisolone Roussel Skin Ointment, Sofradex Cream
Hodgkin's disease	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Hordeolum	Soframycin Ophthalmic Ointment
Hydrarthrosis	Hydrocortisone Roussel Injectable
Hyperestrinic syndrome	Sterandryl Retard
Hypermenorrhea	Sterandryl Retard
Hypertension, essential	Decaserpyl, Decaserpyl Plus
Hypertension in pregnancy	Decaserpyl, Decaserpyl Plus
Hypertension, renal	Decaserpyl
Hypoglycemia, acute	Hydrocortisone Roussel Intravenous
Hypogonadism in men	Sterandryl, Sterandryl Retard
Ileitis, regional	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Impetigo	Sofradex Cream
Impotence, organic	Sterandryl, Sterandryl Retard
Infarction, myocardial	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Infection, toxemia in	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Intravenous, Prednisolone Roussel Tablets

Infertility due to nidatory failure	Lutonestryl
Influenzal pneumonia	Bi-Decortisyl ,Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Intravenous, Prednisolone Roussel Tablets
Insect bites	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Intravenous, Hydrocortisone Roussel Skin Ointment, Prednisolone Roussel Tablets
Intertrigo	Hydrocortisone Roussel Skin Ointment, Prednisolone Roussel Skin Ointment, Sofradex cream
Iridocyclitis	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Collyrium, Hydrocortisone Roussel Injectable, Hydrocortisone Roussel Ophthalmic Ointment, Prednisolone Roussel Collyrium, Prednisolone Roussel Tablets, Soframisone Collyrium, Soframycin Ophthalmic Ointment
Iritis	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Collyrium, Hydrocortisone Roussel Injectable, Hydrocortisone Roussel Ophthalmic Ointment, Prednisolone Roussel Collyrium, Prednisolone Roussel Tablets, Soframisone Collyrium, Soframycin Ophthalmic Ointment
Jaundice, acute	Hydrocortisone Roussel Intravenous
Keloids	Hydrocortisone Roussel Injectable
Keratitis	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Collyrium, Hydrocortisone Roussel Injectable, Hydrocortisone Roussel Ophthalmic Ointment, Prednisolone Roussel Tablets, Prednisolone Roussel Collyrium, Soframisone Collyrium

Keratoplasty, (post-operatively)	Hydrocortisone Roussel Collyrium, Hydrocortisone Roussel Ophthalmic Ointment, Prednisolone Roussel Collyrium, Soframisone Collyrium, Soframycin Ophthalmic Ointment
Lactation, inhibition of	Ethinestryl
Laryngeal edema	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Intravenous, Prednisolone Roussel Tablets
Leucopenia	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Leucorrhea	Ethinestryl
Leukemia	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Lichen planus	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Loeffler's syndrome	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Lumbo-sciatica	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injectable, Prednisolone Roussel Tablets
Lupus erythematosus	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Lupus vulgaris	Sterogyl 15
Lymphomas	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Malignant tumours	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Mastoid cavities	Soframisone Collyrium
Maxillary sinusitis, (chronic, in children)	Hydrocortisone Roussel Injectable
Meibomitis	Soframycin Ophthalmic Ointment
Meningitis	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injectable, Prednisolone Roussel Tablets

Meno-metrorrhagia	Sterandryl, Sterandryl Retard
Menopause	Ethinestryl, Geronyl
Migraine	Sterogyl 15
Mononucleosis, infectious	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Myocardial infarction	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Nephrosis, lipoid	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Neuralgia	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injectable, Prednisolone Roussel Tablets
Neurinomas, painful	Hydrocortisone Roussel Injectable
Neuritis, retrobulbar	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injectable, Prednisolone Roussel Tablets
Neurodermatitis	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Neutropenia	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Nidatory failure	Lutonestryl
Ocular surgery, (post-operatively in)	Hydrocortisone Roussel Collyrium, Hydrocortisone Roussel Ophthalmic Ointment, Soframisone Collyrium
Optic neuritis	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injectable, Prednisolone Roussel Tablets
Osteomalacia	Sterogyl 15
Osteoporosis	Ethinestryl, Geronyl, Sterandryl Retard, Sterogyl 15
Otitis externa	Soframisone Collyrium, Sofradex Cream
Otitis media, chronic	Soframisone Collyrium
Paget's Disease	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets, Sterogyl 15
Panophthalmitis	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets

Paralysis, facial	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injectable, Prednisolone Roussel Tablets
Paraplegia	Hydrocortisone Roussel Injectable
Para-psoriasis	Sterogyl 15
Parodontitis	Hydrocortisone Roussel Injectable
Pemphigus	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Periarteritis nodosa	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Periarthritis, scapulo-humeral	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injectable, Prednisolone Roussel Tablets
Pericarditis	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injectable, Prednisolone Roussel Tablets
Peyronie's disease	Hydrocortisone Roussel Injectable
Plastic surgery, (post-operatively in)	Hydrocortisone Roussel Skin Ointment, Prednisolone Roussel Skin Ointment, Sofradex Cream
Pleurisy, serofibrinous	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injectable, Prednisolone Roussel Tablets
Pneumonia, influenzal	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Intravenous, Prednisolone Roussel Tablets
Polymenorrhea	Sterandryl Retard
Polyposis, nasal	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injectable, Prednisolone Roussel Tablets
Pregnancy test	Lutonestryl
Premenstrual syndrome	Sterandryl Retard
Prostatic hypertrophy, benign	Sterandryl, Sterandryl Retard
Pruritus, anogenital	Hydrocortisone Roussel Skin Ointment, Prednisolone Roussel Skin Ointment, Proctosedyl, Sofradex Cream

Pruritus, localised	Hydrocortisone Roussel Skin Ointment, Prednisolone Roussel Skin Ointment, Sofradex Cream
Psoriasis	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets, Sterogyl 15
Puberty, delayed, in boys	Sterandryl, Sterandryl Retard
Pulpitis	Hydrocortisone Roussel Injectable
Purpura, allergic	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Purpura, thrombocytopenic	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Pyoderma	Sofradex Cream
Pyorrhea, alveolo-dental	Hydrocortisone Roussel Injectable
Pyramidal sequelae	Hydrocortisone Roussel Injectable
Quadriplegia	Hydrocortisone Roussel Injectable
Recto-colitis	Hydrocortisone Roussel Injectable
Reticulosarcoma	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Retinitis	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Rh accidents of the new-born	Cortisone Roussel Injectable, Hydrocortisone Roussel Intravenous
Rheumatic cardiopathies	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Rheumatic fever	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Rheumatoid arthritis	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injectable, Prednisolone Roussel Tablets
Rhinitis, allergic	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injectable, Prednisolone Roussel Tablets, Sterogyl 15

Rickets	Sterogyl 15, Sterogyl Drops
Sarcoidosis	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Scapulo-humeral periarthritis	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injectable, Prednisolone Roussel Tablets
Sciatica	Hydrocortisone Roussel Injectable
Scleritis	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Collyrium, Hydrocortisone Roussel Injectable, Hydrocortisone Roussel Ophthalmic Ointment, Prednisolone Roussel Collyrium, Prednisolone Roussel Tablets, Soframisone Collyrium, Soframycin Ophthalmic Ointment
Scleroderma	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Sclerosis, multiple	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injectable. Prednisolone Roussel Tablets
Senescence, male	Geronyl, Sterandryl Retard
Septicemia	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Intravenous, Prednisolone Roussel Tablets
Serum sickness	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Intravenous, Prednisolone Roussel Tablets
Shock and collapse (*Surgical, obstetrical and due to burns, trauma, transfusions, drowning, Thorn's test*)	Cortisone Roussel Injectable, Hydrocortisone Roussel Intravenous
Sigmoiditis	Hydrocortisone Roussel Injectable

Silicosis	Bi-Decortisyl, Cortasmyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Snake bites	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Intravenous, Prednisolone Roussel Tablets
Spasmophilia	Sterogyl 15
Spider stings	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Intravenous, Prednisolone Roussel Tablets
Sprue, idiopathic	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Stenosis, cicatricial	Hydrocortisone Roussel Injectable
Sterility in men (*due to oligospermia*)	Sterandryl
Stomatitis	Hydrocortisone Roussel Injectable
Stye	Soframycin Ophthalmic Ointment
Styloiditis	Hydrocortisone Roussel Injectable
Sunburn	Hydrocortisone Roussel Skin Ointment, Prednisolone Roussel Skin Ointment
Sycosis barbae	Sofradex Cream
Sympathetic ophthalmia	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injectable, Hydrocortisone Roussel Intravenous, Prednisolone Roussel Tablets
Synovial cysts	Hydrocortisone Roussel Injectable
Synovitis	Hydrocortisone Roussel Injectable
Tabes dorsalis	Hydrocortisone Roussel Injectable
Tendinitis	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Injectable, Prednisolone Roussel Tablets
Tenosynovitis	Hydrocortisone Roussel Injectable
Tetany	Sterogyl 15
Transfusional venous reaction	Hydrocortisone Roussel Intravenous
Tubal stenosis	Hydrocortisone Roussel Injectable

Tuberculosis, pulmonary	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets, Sterogyl 15
Tuberculosis, skin	Sterogyl 15
Tubo-tympanic catarrh	Hydrocortisone Roussel Injectable
Typhoid, toxemia of	Bi-Decortisyl, Cortisone Roussel Injectable, Dexacortisyl, Dexacortisyl Plus, Prednisolone Roussel Tablets
Urethral stricture	Hydrocortisone Roussel Injectable
Urticaria	Bi-Decortisyl, Dexacortisyl, Dexacortisyl Plus, Hydrocortisone Roussel Skin Ointment, Prednisolone Roussel Tablets, Sterogyl 15
Uterine fibroids	Sterandryl Retard
Weight-loss	Sterandryl Retard
X-Ray dermatitis	Hydrocortisone Roussel Skin Ointment, Prednisolone Roussel Skin Ointment
Zosteroid pains	Hydrocortisone Roussel Injectable.

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